

5914-090

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**FIG. 1**

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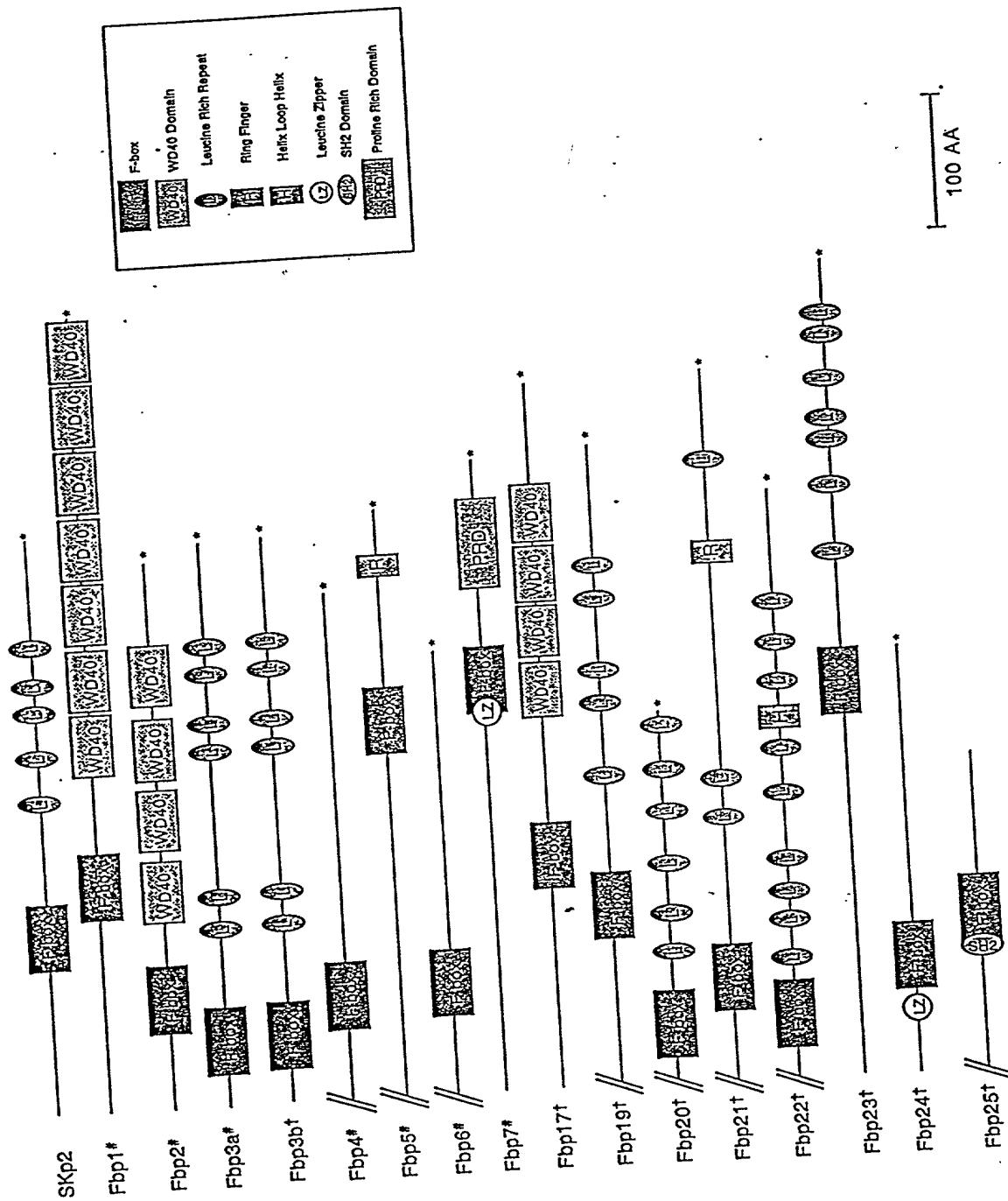


FIG. 2

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10            20            30            40            50            60  
MDPAEAVLQEALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA

70            80            90            100          110          120  
STAMKTENCVAKTKLANTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESVDQVEFVEHL

130          140          150          160          170          180  
ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAEVCKEWY

190          200          210          220          230          240  
RVTSDGMLWKLIERMVRDSDLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII

250          260          270          280          290          300  
QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK

310          320          330          340          350          360  
RILTGHGTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNLTIHCEAVLHLRFNNNGMM

370          380          390          400          410          420  
VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC

430          440          450          460          470          480  
EFVRTLNGHKRGIACLQYRDRLVVGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN

490          500          510          520          530          540  
KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT

550          560  
ILIWDFLNDPAAQAEPPRSPSRTYTYISR

FIG. 3A

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10 20 30 40 50 60 70 80 90  
 TCGGTTGGCTGGCCCTGGCACCAAGGGCGGCCCCGGGGAGAGCGGACCCAGTGGCTGGCGATTATGGACCCCGGGAGGGGGCTGC  
 100 110 120 - 130 140 150 160 170 180  
 AAGAGAAGGCACTCAAGTTATGAATTCTCAGAGAGAAGACTGTAAATAATGGCGAACCCCTAGGAAGATAATACCAGAGAAGAAATTCACT  
 190 200 210 220 230 240 250 260 270 280  
 TAGACAGACATACAACAGCTGTGCCAGACTCTGCTTAACCAAGAAACAGTATGTTAGCAAGCACTGCTATGAAGACTGAGAATTGTGTGCC  
 290 300 310 320 330 340 350 360 370  
 AAAACAAAATGCCAATGGCACTTCCAGATGATTGTGCCAACCGAAACCTCTCAGCAAGCTATGAAAAGGAAAGGAACGTGTGCC  
 380 390 400 410 420 430 440 450 460 470  
 AATACTTTGAGCAGTGGTCAGAGTCAGATCAAGTGGATTGTGGAACACTCTTATATCCCAATGTGTCAATTACCAACATGGCACATAACTC  
 480 490 500 510 520 530 540 550 560  
 GTATCTAAACCTATGTTGAGAGAGATTCTAACTGCTCTGCCAGCTGGGATTGGATCATATCCCTGAGAACATTCTGTCACTCCGGAT  
 570 580 590 600 610 620 630 640 650  
 GCCAAAATCACTATGTCGCTGCAACTTGTCAGAACGGATGGTACCGAGTGCACCTCTGATGGCATGCTGTGGAAAGAACCTTATCGAGAGAATGG  
 660 670 680 690 700 710 720 730 740 750  
 TCAGGACAGATTCTCTGTCGGAGGGCTGGCAGAACGAGGGATGGGACAGTATTATTCAAAAACAAACCTOCTGACGGGAATGTCCTCOC  
 760 770 780 790 800 810 820 830 840  
 CAAACTTTTATAGACCACTTATCTAAAATTATAACAGACATTGAGACAATAGAACTCTAATTGGAGATGTGGAAAGACATAGTTACAGAGA  
 850 860 870 880 890 900 910 920 930 940  
 ATTCACTGCCAAGTGAACAAAGCAAAGGAGTTACTGTTACAGTATGATGATCAGAAAATAGTAACGGCCCTCGAGACAAACAAATCAAGA  
 950 960 970 980 990 1000 1010 1020 1030  
 TCTGGGATAAAAACACATGGAATGCAAGCGAATTCTCACAGGCCATACAGGTTAGTCTGTCAGGATATGATGACAGAGACTGATCATAAAC  
 1040 1050 1060 1070 1080 1090 1100 1110 1120  
 AGCATCATCGGATTCCACGGTCAGAGTGTGGGATGTAACACAGGTGAATGCTAACACGTTGATTACCACTTGTGAAGCAGTTCTGCACTTG  
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
 CGTTCAATAATGGCATGATGGTGCACCTGCTCCAAAGATCGTCCATTGCTGTATGGGATATGGCCTCCCCACTGACATTACCTCCGGAGGG  
 1230 1240 1250 1260 1270 1280 1290 1300 1310  
 TGCTGGTCGGACACCGAGCTGCTCAATGTTGAGACTTGTGATGACAAGTACATTGTTCTGCATCTGGGATAGAACATATAAGGTATGGAA  
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
 CACAAGTACTGTGAATTGTAAGGACCTTAAATGGACACACAGGAGGCAATTGCGTGTGGTAGACTACAGGCTGGTAGTGAGTGGCTCA  
 1420 1430 1440 1450 1460 1470 1480 1490 1500  
 TCTGACAAACTATCAGATTATGGGACATAGAAATGTCGTCATGTTACAGTGTAGAGGCAAGCCATGAGGAATTGGTCCGGTTGATTCGATTG  
 1510 1520 1530 1540 1550 1560 1570 1580 1590  
 ATAACAAGAGGATAGTCAGTGGGGCTATGATGGAAAATTAAAGTGTGGGATCTGTCAGTACAGTTGATGAATTCCAGATTGTCAGTAGTTAC  
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690  
 CTGTCACGGACCCCTGGGAGCATCCGGAAAGAGTTTCTGACTACAGTTGATGAATTCCAGATTGTCAGTAGTTACATGATGACACAATC  
 1700 1710 1720 1730 1740 1750 1760 1770 1780  
 CTCATCTGGACTTCTAAATGATCCAGCTGCCAACGCTGAACCCCCCGGTTCCCTCTCGAACATACACCTACATCTCAGATAAAATAACCA  
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880  
 TACACTGACCTCATACTTGGCCAGGACCCATTAAAGTGTGGTATTAACTGATCTGCCAATACCAGGATGAGCAACACAGTAAACATCAAC  
 1890 1900 1910 1920 1930 1940 1950 1960 1970  
 TACTGCCCAGTTCCCTGGACTAGCCGGAGGAGCAGGGTTGAGACTCTGTTGGACACAGTTGGTCTGCACTGGGCCCAGGACGGTCTACTC  
 1980 1990 2000 2010 2020 2030 2040 2050 2060  
 AGCCAAACTGACTGCTTCAGTGTGCTATCAGAAGATGTCCTCTATCAATTGTGAATGATTGGAACATTAAACCTCCCTCCTCTCCTCT  
 2070 2080 2090 2100 2110 2120 2130 2140 2150  
 CACCTCTGACACTAGTTTCTCCATTGTTGCCAGAACAGGTGACTTATAAAATATTAGTGTGTCAGTGGGCCCAGGACGGTCTACTC

FIG. 3B

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10            20            30            40            50            60  
MERKDFETWLDNISVTFLSLTDLQNETLDHLISLSGAVQLRHLSNNLETLLKRDFLKLL

70            80            90            100          110          120  
PLELSFYLLKWLDPQTLLTCCLVSKQWNKVVISACTEVWQTACKNLGWQIDDSVQDALHWK

130          140          150          160          170          180  
KVYLKAILRMKQLEDHEAFETSSLIGH SARVYALYYKDGLLCTGSDDL SAKLWDVSTGQC

190          200          210          220          230          240  
VYGIQTHTCAAVKFDEQKLVTGSFDNTVACWEWSSGARTQHFRGHTGAVFSVDYNDELDI

250          260          270          280          290          300  
LVSGSADFTVKVWALSAGTCLNTLTGHTEWTKVVLQKCKVKSLLHSPGDYILLSADKYE

310          320          330          340          350          360  
IKIWPIGREINCKCLKTL SVSEDRSICLQPR LHFDGKYIVCSSAL GLYQWDFASYDILRV

370          380          390          400          410          420  
IKTPEIANLALLGFGDIFALLFDNR YLYIMDLRTE SLISRWP LPEYRESKRGSSFLAGEH

PG

FIG. 4A

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10 20 30 40 50 60 70 80 90  
ATGGAGAGAAAAGGACTTTGAGACATGGCTTGATAAACATTCTGTACATTTCTCTGACGGACTTGAGAAAAATGAAACTCTGGATCACC  
100 110 120 130 140 150 160 170 180  
TGATTAAGTCTGAGTGGGGCAGTCAGCTCAGGCATCTCCAAATAACCTAGAGACTCTCCTCAAGCGGGACTTCCCTCAAACCTCCCTCCCCCTGGA  
190 200 210 220 230 240 250 260 270 280  
GCTCAGTTTATTGTTAAAATGGCTCGATCCTCAGACTTACTCACATGTCGCTCGTCTCAAACAGTGGAAATAAGGTGATAAGTGCTGT  
290 300 310 320 330 340 350 360 370  
ACAGAGGTGTGGCAGACTGCATGTAAGGTTGGCTGGCAGATAGATGATTGTCAGGACGCTTGCACTGGAAAGGTTTATTGAGG  
380 390 400 410 420 430 440 450 460 470  
CTATTTGAGAATGAAAGCAACTGGAGGACCATGAAAGCCTTGAACACCTCGTCATTAATTGGACACAGTGGCCAGAGTGTATGCACTTACTACAA  
480 490 500 510 520 530 540 550 560  
AGATGGACTCTCTGTACAGGGTCAGATGACTTGTCTGCAAAGCTGTGGGATGTGAGCACAGGGCAGTOCGTTATGGCATCCAGACCCACACT  
570 580 590 600 610 620 630 640 650  
TGTGAGCGGTGAAGTTGATGAAAGACAGCTTGACAGGGCTCTTGACAACACTGTGTCCTGCTGGGATGGAGTTCCGGACCCAGGACCC  
660 670 680 690 700 710 720 730 740 750  
AGCACTTTCGGGGCACACGGGGCGGTATTAGCGTGGACTACAATGATGAACTGGATATCTTGGTGAACGGCTCTGCAGACTTCACTGTGAA  
760 770 780 790 800 810 820 830 840  
AGTATGGCTTATCTGCTGGACATGCCCTGAACACACTCACCGGGCACACGGAAATGGTCACCAAGGTAGTTTGCAGAAGTGCAAAGTCAAG  
850 860 870 880 890 900 910 920 930 940  
TCTCTTGCACAGTCCCTGGAGACTACATCCTCTTAAGTCGACAGACAAATATGAGATTAAGATTGGCCAATTGGGAGAGAAATCAACTGTAACT  
950 960 970 980 990 1000 1010 1020 1030  
GCTTAAAGACATTGCTGTCTGAGGGATAGAAAGTATCTGCCCTGAGCCAAGACTTCATTGATGGCAAATACATTGTCGTAGTTCAGCACT  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
TGGCTCTACCAGGGACTTGGCAGTTATGATATTCTCAGGGTCATCAAGACTCCTGAGATAGCAAACCTTGGCTTGCTGGCTTGGAGAT  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
ATCTTGCCTGCTGTTGACAACCGCTACCTGTACATCATGGACTTGGGACAGAGAGGCTGATTAGTGCCTGGCTCTGCCAGAGTACAGGG  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
AATCAAAGAGAGGCTCAAGCTTCTGGCAGGGACACATCTGGCTGAATGGACTGGATGGCACAAATGACACGGGCTTGGCTTGGCACCAGC  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
ATGCCCTGACCACAGTATTCACTGGTGTGGAGGGACACGGCTGACACCATGAGCCACCACCGCTGACTGACTTGGGTGCCGGGCTGG  
1420 1430 1440 1450 1460 1470

FIG. 4B

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10            20            30            40            50            60  
MKRGGRDSDRNSSEGTAEKSKKLRTTNEHSQTCDWGNLLQDIILQVFKYLPLLDRAHAS

70            80            90            100          110          120  
QVCRNWNQVFHMPDLWRCEFEELNQPATSYLKATHPELIKQITKRHSNHLQYVSFKVDSS

130          140          150          160          170          180  
KESAEAACDILSQLVNCSLKTLGLISTARPSFMDLPKSHFISALTVVVFVNSKSLSLKID

190          200          210          220          230          240  
DTPVDDPSLKVLVANNSDTLKLLKMSSCPHVSPAGILCVADQCHGLRELALNYHLLSDEL

250          260          270          280          290          300  
LLALSSEKHVRLEHLRIDVVSENPGQTHFTIQKSSWDAFIRHSPKVNLVMYFFLYEEF

310          320          330          340          350          360  
DPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPRLVELVVVCANGLRPLDEELIRIAERCKN

370          380          390          400          410          420  
LSAIGLGECEVSCSAFVEFVKMCGGRLSQLSIMEEVLIPDQKYSLEQIHWEVSKHLGRVW

FPDMMPTW

FIG. 5A

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10 20 30 40 50 60 70 80 90  
CGGGGTGGTCTGCGGGGAAGCCCCCCCCGCAGCAGGATGAAACGAGGAGGAAGAGATAAGTGACCGTAATTCAAGAAGAAGGAACACTGCAGA  
100 110 120 130 140 150 160 170 180  
GAAATCCAAGAAAAGTGGAGACTACAAATGAGCATTCAGACTTGTGATTGGGTAATCTCCCTCAGGACATTCTCCAAGTATTAAATAT  
190 200 210 220 230 240 250 260 270 280  
TTGCCCTCTCTTGACCGGGCTCATGCTTCACAAGTTGCCAAGTGGAAACCAGGTATTCACATGCCGTGACTTGTGGAGATGTTGAATTG  
290 300 310 320 330 340 350 360 370  
AACTGAATCAGCCAGCTACATCTTATTGAAAGCTACCCATCCAGAGCTGATCAAACAGATTATTAAGACATTCAAAACCACATCTACAATATGT  
380 390 400 410 420 430 440 450 460 470  
CAGCTCAAGGTGGACAGCAGCAAGGAATCAGCTGAAGCAGCTTGTGATATACTATCGCAACTTGTGAAATTGCTCTTAAAAACACTGGACTT  
480 490 500 510 520 530 540 550 560  
ATTTCAACTGCTCGACCAAGCTTATGGATTACCAAAGTCTCACCTTATCTCTGCACTGACAGTGTGTTCTGAAACTCCAAATCCCTGCTT  
570 580 590 600 610 620 630 640 650  
CGCTTAAGATAGATGATACTCCAGTAGATGATCCATCTCTCAAAGTACTAGTGCCAAACAATAGTGATACACTCAAGCTGTGAAATGAGCAG  
660 670 680 690 700 710 720 730 740 750  
CTGTCTCATGTCCTCCAGCAGGTATCCTTGTGTTGGCTGATCAGTGTCAAGGCTTAAGAGAACTAGCCCTGAACTACCACTTATTGAGTGAT  
760 770 780 790 800 810 820 830 840  
GAGTTGTTACTTGCATTGCTTCTGAAAAACATGTTGCGATTAGAACATTGCGCATTGATGTAGTCAGTGAGAACATCTGGACAGACACACTTCC  
850 860 870 880 890 900 910 920 930 940  
ATACTATTCAAGAGTAGCTGGATGCTTCATCAGACATTACCCAAAGTAGAACATTAGTGATGTTATTTTTTATATGAAGAAGAATTG  
950 960 970 980 990 1000 1010 1020 1030  
CCCCCTCTTCGCTATGAAATACCTGCCACCCATCTGACTTGGGAGATCAGTAAGCAAGATGTGCTTGGCGTGTGGAAATGACATGCCCT  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
AGACTGGTCAACTAGTAGTGTTGCAAAATGGATTACGCCACTTGATGAAGACTTAATTGCAATTGCAACGTTGCAAAATTTGTCAGCTA  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
TTGGACTAGGGAAATGTGAAGTCTCATGTTGAGTTGTGAAAGATGTGTTGGTGGCGCTATCTCAATTATCCATTATGGAAAGA  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
AGTACTAATTCTGACCAAAAGTATAGTTGGAGCAGATTCACTGGAAAGTGTCCAAGCATCTTGTTGGGTGTGTTCCCGACATGATGCC  
1320 1330 1340 1350 1360 1370 1380 1390 1400  
ACTTGGTAAAAACTGCATGATGAATAGCACCTTAATTCAAGCAATGTATTATAATTAAAGTTATTGCTGTAAAAAAAAAAAAAAA

FIG. 5B

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10            20            30            40            50            60  
MKRNSLSVENKIVQLSGAAKQPKVGFYSSLNQTHTHTVLLDWGSLPHHVVLQIFQYLPLL

70            80            90            100          110          120  
DRACASSVCRRWNEVFHISDLWRKFELNQSATSSFKSTHPDLIQQIICKHFAHLQYVS

130          140          150          160          170          180  
FKVDSSAESAEAACDILSQLVNCSIQTLGLISTAKPSFMNVSEHFVSALTVVFINSKSL

190          200          210          220          230          240  
SSIKIEDTPVDDPSLKILVANNSDTLRLPKMSSCPHVSSDGILCVADRCQGLRELALNYY

250          260          270          280          290          300  
ILTDELFLALSSETHVNLEHLRIDVVSENPGQIKFHAVKKHSWDALIKHSPRVNVVMHFF

310          320          330          340          350          360  
LYEEEFETFFKEETPVTHLYFGRSVSKVVLGRVGLNCPRLTIELVVCANDLQPLDNELICI

370          380          390          400          410          420  
AEHCTNLTALGLSKCEVSCSAFIRFVRLCERRLTQLSVMEEVLIPDEDYSLDEIHTEVSK

430  
YLGRVWFPPDVMPNW

FIG. 6A

	10	20	30	40	50	60	
ACATTTCTAATGTTACAGAACAGGAACTGTTATCTGTTGAGAATAAAATTGTCCAGTTGTCA							
70	80	90	100	110	120	130	
GGAGCAGCGAAACAGCCAAAAGTGGGTTCTACTCTCTCAACCAGACTCATACACACAGGTTCTT							
140	150	160	170	180	190	200	
CTAGACTGGGGAGTTGCCTCACCATGTTAGTATTACAAATTTCAGTATCTCCTTACTAGATCGG							
210	220	230	240	250	260	270	
GCCTGTGCATCTCTGTATGTTAGGAGGTGAATGAAGTTTCATATTCTGACCTTGGAGAAAGTT							
280	290	300	310	320	330	340	
GAATTTGAACAGTCAGCTACTTCATCTTAAGTCCACTCATCCTGATCTCATTGAGCAGATC							
350	360	370	380	390	400	410	
ATTAAGCATTGCTCATCTCAGTGTAAATTGTTCCATCCAGACCTTGGGCTTGATTCAACAGCC							
420	430	440	450	460	470	480	
GCTGCCTGTGATATACTCTCAGCTGGTAATTGTTCCATCCAGACCTTGGGCTTGATTCAACAGCC							
490	500	510	520	530	540	550	
AAGCCAAGTTCATGAATGTCGGAGTCTCATTTGTGTCAGCACTTACAGTTGTTTATCAACTCA							
560	570	580	590	600	610	620	
AAATCATTATCATCAATCAAAATTGAAGATAACACCAGTGGATGATCCTTCATTGAAGATTCTGTGGCC							
630	640	650	660	670	680	690	
AATAATAGTGCACACTCTAACAGACTCCCAGATGAGTAGCTGTCCTCATGTTTCATCTGATGGAATTCTT							
700	710	720	730	740	750		
TGTGTAGCTGACCGTTGTCAAGGCCTTAGAGAACTGGCGTTGAATTATTACATCCTAACTGATGAACTT							
760	770	780	790	800	810	820	
TTCCCTGCACTCTAACGGAGACTCATGTTAACCTTGAAACATCTCGAATTGATGTTGAGTGAAGAAAT							
830	840	850	860	870	880	890	
CCTGGACAGATTAAATTTCATGCTTTAAAAACACAGTTGGGATGCACTTAAACATTCCCTAGA							
900	910	920	930	940	950	960	
GTTAACATGTTATGCACTCTTCTATATGAAGAGGAATCGAGACGTTCTCAAAGAAAGAAACCCCT							
970	980	990	1000	1010	1020	1030	
GTTACTCACCTTATTTGGTCGTCAGTCAGCAAGTGGTTTAGGACGGGTAGGTCTCAACTGTCCT							
1040	1050	1060	1070	1080	1090	1100	
CGACTGATTGAGTTAGTGGTGTGCTAATGATCTCAGCCTCTTGATAATGAACATTGTTATGCT							
1110	1120	1130	1140	1150	1160	1170	
GAACACTGTACAAACCTAACAGCCTGGCCTCAGCAAATGTGAAGTTAGCTGCAGTGCCTTCATCAGG							
1180	1190	1200	1210	1220	1230	1240	
TTTGTAAAGACTGTGAGAGAAGGTTAACACAGCTCTCTGTAATGGAGGAAGTTGATCCCTGATGAG							
1250	1260	1270	1280	1290	1300	1310	
GATTATAGCCTAGATGAAATTCAACTGAAGTCTCAAACACTGGGAAGAGTATGGTTCCCTGATGTG							
1320							
ATGCCTCTCTGG							

FIG. 6B

10            20            30            40            50            60  
MAGSEPRSGTNSPPPFSDWGRLEAAILSGWKTFWQSVSKDRVARTTSREEVDEAASLT

70            80            90            100          110          120  
RLPIDVQLYILSFLSPHDLCQLGSTNHYWNETVRNPILWRYFLLRDLPSSVDWKSPLY

130          140          150          160          170          180  
LQILKKPISEVSDGAFFDYMAYLMCCPYTRRASKSSRPMYGAVTSFLHSLIIPNEPRFA

190          200          210          220          230          240  
LFGPRLEQLNTSLVLSLLSSEELCPTAGLPQRQIDGIGSGVNFQLNNQHKFNILILYTT

250          260          270          280          290          300  
RKERDRAREEHTSAVNKMFSRHNEGDDRPGSRYSVIPQIQKLCEVVVDGFIYVANAEAHKR

310          320          330          340          350          360  
HEWQDEFSHIMAMTDPAFGSSGRPLLVLSCISQGDVKRMPCFYLAHELHLNLLNHPWLVQ

370          380          390          400          410          420  
DTEAETLTGFLNGIEWILEEVESKRAR\*FSFQILGTETI\*NLLLRSC\*CEYLLSQPTLSCL

430          440          450          460          470          480  
FADRLSFGQL\*LLCFLYYFYFLP\*INYKKRVSVLVSPKMNL\*TFFW\*FLYFLSF\*KY\*I

L

FIG. 7A

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10 20 30 40 50 60  
ATGGCGGGAAAGCGAGCCGCCAGCGGAACAAATTGCGCCGCCCTTCAGCGACTGGGGCCGCTG  
70 80 90 100 110 120 130  
GAGGCGGCCATCCTCAGCGCTGGAAGACCTCTGGCAGTCAGTGAGCAAGGATAGGGTGGCGCTACG  
140 150 160 170 180 190 200  
ACCTCCCGGGAGGTGGATGAGCGGGCACCGACCCCTGACCGGGCTGCCGATTGATGTACAGCTATAT  
210 220 230 240 250 260 270  
ATTTTGTCCTTCTTCACCTCATGATCTGTCAGTTGGAACTACAATCATTATTGAAATGAAACT  
280 290 300 310 320 330 340  
GTAAGAAATCCAATTCTGTGGAGATACTTTGTTGAGGGATCTCCTCTGGTCTCTGTTGACTGG  
350 360 370 380 390 400 410  
AAGTCTCTCCATATCTACAAATCTAAAAAGCTATATCTGAGGTCTGTGATGGTGCATTTTGAC  
420 430 440 450 460 470 480  
TACATGGCAGTCTATCTAAATGTGCTGTCATACACAAGAAGAGCTCAAATCCACCCGTCCTATGTAT  
490 500 510 520 530 540 550  
GGAGCTGTCACTCTTTTACACTCCCTGATCATCCCCAATGAACCTCGATTGCTCTGGACCA  
560 570 580 590 600 610 620  
CGTTTGGAACATTGAATACCTCTTGGTGTGAGCTTGCTGTCTCAGAGGAACCTTGCACACAGCT  
630 640 650 660 670 680 690  
GGTTTGCCTCAGAGGCAGATTGATGGTATTGGATCAGGAGTCATTTCAAGTTGAACAAACACATAAA  
700 710 720 730 740 750  
TTCAACATTCTAACTTTATTCACACTACCAGAAAGGAAGAGATAGAGCAAGGGAAAGACATACAAGT  
760 770 780 790 800 810 820  
GCAGCTAACAGATGTTAGTCAGTCGACACAATGAAGGTGATGATCGACCAGGAAGCCGTACAGTGTGATT  
830 840 850 860 870 880 890  
CCACAGATTCAAAACTGTGTGAAGTTGATGGTTCACTATGTCAGTCATGGCAATGCTGAAGCTCATAAA  
900 910 920 930 940 950 960  
AGACATGAATGCCAAGATGAATTCTCATATTATGGCAATGACAGATCCAGCCTTGGGTCTCGGGA  
970 980 990 1000 1010 1020 1030  
AGACCATTTGTTGGTTTATCTGTATTCTCAAGGGATGTAAGAATGCCCTGTTTATTTGGCT  
1040 1050 1060 1070 1080 1090 1100  
CATGAGCTGCATCTGAATCTCTAAATCACCCATGGCTGGTCCAGGATACAGGGCTGAAACTCTGACT  
1110 1120 1130 1140 1150 1160 1170  
GGTTTTTGAAATGGCATTGAGTGGATTCTGAAGAAGTGAATCTAAGCGTGCAGATGATTCTTTT  
1180 1190 1200 1210 1220 1230 1240  
CAGATCTGGAACTGAAACCATTTGAAATTATTACTAAGTCGTGATGTGAATATTGCTCAGTCAG  
1250 1260 1270 1280 1290 1300 1310  
CCCACCTTGCCTGCCCTTTCAGATAGGCTTCATTTGGACAGCTATAACTGCTGTGTTTTATAT  
1320 1330 1340 1350 1360 1370 1380  
TATTTTACTTTTACCATAAATCAATTACAGAAAAGAGTTTCAGTCCTAGTATTAGCCCCAAAATG  
1390 1400 1410 1420 1430 1440  
AACCTTAAACATTGGTATTTTATTTCTGTCCTTTAAAAATATTAAATTGG

FIG. 7B

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10	20	30	40	50	60
MSRRPCSCALRPPRCSCSASPASAVTAAGRPRPSDSCKEESSTLSVKMKCDFNCNVHSGL					
70	80	90	100	110	120
KLVKPDDIGRLVSYTPAYLEGSCKDICKDYERLSCIGSPIVSPRIVQLETESKRLHNKEN					
130	140	150	160	170	180
QHVQQTLNSTNEIEALETSLRYEDSGYSSFSLQSGLSEHEEGSLLEENFGDSLQSCLLQI					
190	200	210	220	230	240
QSPDQYPNKNLLPVLHFEKVVVCSTLKKNAKRNPKVDRMLKEITARGNFRQLQNIIGRKMG					
250	260	270	280	290	300
LECVDILSELFRRGLRHVLATILAQLSDMDLINVSKVTTWKKILEDDKGAFQLYSKAIQ					
310	320	330	340	350	360
RVTENNPKFSPHASTREYVMFRPLASVQKSAAQTSKKDAQTKLSNQGDQKGSTYSRHN					
370	380	390	400	410	420
EFSEVAKTLKKNESLKACIRCNSPAKYDCYLQRATCKREGCGFDYCTKCLCNYHTTKDCS					
430	440				
DGKLLKASCKIGPLPGTKSKKNLRL					

FIG. 8A

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10 20 30 40 50 60 70 80 90  
 AGGTTGCTCAGCTGCCCGGAGCGGTTCCTCCACCTGAGGCAGACACCACCTCGGTTGGCATGAGCCGGCCCCCTGCAGCTGCGCCCTACGG  
 100 110 120 130 140 150 160 170 180  
 CCACCCCGCTGCTCCCTGAGGCCAGCCCCAGCGCAGTGCACAGCCCGGGCGCCCTCGACCCCTGGATAGTTGTAAGAAGAAAGATTCTACCC  
 190 200 210 220 230 240 250 260 270 280  
 TTTCCTGTCAAAATGAAGTGTGATTTAATTTGTAACCATGTCATTCCGGACTTAAACTGGTAAACCTGTGATGACATTGAAAGACTAGTTCTCA  
 290 300 310 320 330 340 350 360 370  
 CACCCCTGCATATCTGAAAGGTTCCCTGTAAGACTGCATTAAAGACTATGAAAGGCTGTATGATTGGTCACCGATTGTGAGCCCTAGGATT  
 380 390 400 410 420 430 440 450 460 470  
 GTACAACCTGAAAGCAAGCGCTTGATAACAAGGAAAATCACATGTGCAACAGACACTTAATAGTACAAATGAAATAGAAGCACTAG  
 480 490 500 510 520 530 540 550 560  
 AGACCAGTAGACTTATGAAGACAGTGGCTATTCCCTCATTTCTCTACAAAGTGGCTCAGTGACACATGAAAGGTAGCCTCCGGAGGAGAA  
 570 580 590 600 610 620 630 640 650  
 TTTCGGTACAGTCTACAATCCTGCTGCTACAAATACAAAGCCAGACCAATATCCCACAAAACCTTGCTGCCAGTTCTCATTTGAAAGAAAA  
 660 670 680 690 700 710 720 730 740 750  
 GTGGTTGTTCAACATTTAAAAGAATGCAAACGAAATCCTAAAGTAGATCGGAGATGCTGAAGGAATTATAGCCAGAGGAAATTTAGAC  
 760 770 780 790 800 810 820 830 840  
 TGCAGAAATAATTGGCAGAAAATGGCCCTAGAATGTTAGATATTCTCAGCGAACTCTTCGAGGGACTCAGACATGCTTAGCAACTAT  
 850 860 870 880 890 900 910 920 930 940  
 TTTCAGCACAACTCAGTGACATGGACTTAATCAATGTCCTAAAGTGACCAACTTGGAAAGAAGATCCTAGAAGATGATAAGGGCATTCCAG  
 950 960 970 980 990 1000 1010 1020 1030  
 TTGTACAGTAAAGCAATACAAAGACTTACCGAAAACAATAATTTCACCTCATGCTTCAACCAGAGAAATATGTTATGTTAGAAGCCCAC  
 1040 1050 1060 1070 1080 1090 1100 1110 1120  
 TGGCTTCTGTTAGAAATCAGCAGCCAGACTTCTCTCAAAAAGATGCTCAAACCAAGTTATCCAACTCAAGGTGATCAGAAAGGTTCTACTTA  
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
 TAGTCGACACAAATGAATTCTCTGAGGTTGCCAAGACATTGAAAAGAACGAAAGCCTCAAAGCCTGATTGCTGTAATTACCTGCAAAATAT  
 1230 1240 1250 1260 1270 1280 1290 1300 1310  
 GATTGCTATTACACGGCAACCTCAAACGAGAAGGCTGTGGATTGTTAGATTGTCAGAAAGTGTCTCTGTAATTATCATACTACTAAAGACT  
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
 GTTCAGATGCCAAGCTCTCAAAGCCAGTTGTAATAGTCCCCCTGCCCTGGTACAAAGAAAAGCAAAAGAATTACGAAGATGTTGATCTCT  
 1420 1430 1440 1450 1460 1470 1480 1490 1500  
 TATTAATCAATTGTTACTGATCATGAATGTTAGTTAGAAAATGTTAGGTTAACCTAAAGGAAATTGTTAGGTTCAATTGTTATGTTG  
 1510 1520 1530 1540 1550 1560 1570 1580 1590  
 AAATCGGTGTTAGTATCCTGAGGTTTTCCCCCAGAAGATAAAGGGATAGACAAACCTCTTAAATATTTTACAATTAAATGAGAAAAGT  
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690  
 TTTAAATCTCAATACAAATCAAACATTAAATTTAAGAAAAAGGAAAAGTAGATGTTAGACTGAGGGTAAAAAAATTGATTCAA  
 1700 1710 1720 1730 1740 1750 1760 1770 1780  
 TTTTATGGTAAAGGAACCCATGCAATTACCTGAGACAGTCTTAAATATGTCCTGTTCCATGTTAGCATTTCAGACATTATGTTCT  
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880  
 CTTACTCAATTGATACCAACAGAAAATATCAACTCTGGAGTCTATTAAATGTTGTCACCTTCTAAAGCTTTTCATTGTTGTTATTCC  
 1890 1900 1910 1920 1930 1940 1950 1960 1970  
 CAAGAAAAGTATCCTTGTAAAAACTTGCTTCTTATTCTGAAATCTGTTAAATTTTGTATACATGTAATATTCTGTATT  
 1980 1990 2000 2010 2020 2030 2040 2050 2060  
 TATATGTCAGAAATATGTCCTTGTATGTCACATAAAAATAATTGTCATAAAAATGTAAGCTTAAAAAAACTCGAG

2070  
ACTAGTGC

FIG. 8B

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10	20	30	40	50	60
ARSGASALRRRRVQVVWLSRPPPGGGDSFRTRPQRGPAGPGGSQAMDAPHSKAALDSINE					
70	80	90	100	110	120
LPDNILLELFTHVPARQLLNCRILVCSLWRDLIDLLTLWKRKCLRKGFITKDWDQPVADW					
130	140	150	160	170	180
KIFYFLRSLLHRNLLRNPCAENDMFAWQIDFNGGDRWKVDLSLPGAHGTEFPDPKVKKSFVT					
190	200	210	220	230	240
SYELCLKWELVDLLADRYWEELLDTFRPDIVVKDWFAARADCCTYQLKVQLASADYFVL					
250	260	270	280	290	300
ASFEPVVITIQQWNNAWTTEVSYTFSDYPRGVRYILFQHGRDTQYWAGWYGPRVTNSSI					
310	320	330			
VVSPKMTRNQASSEAQPGQKHGQEEAAQSPPYGAVVQIF					

FIG. 9A

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10 20 30 40 50 60 70 80 90  
CCCCGGTTCGGGAGCTCGGCCCTGCGGTAGGAGGGGGTGCAGGTGTTGCTGAGCCGCCCTGGAGGGGAGACAGCTTCAGGACAC  
100 110 120 130 140 150 160 170 180  
GCAGGGCCAGCGAGGGCCCGGGGGATCCAGGCCATGGACGCTCCCACCTCCAAAGCAGCCCTGGACAGCATTAACGAGCTGCCGA  
190 200 210 220 230 240 250 260 270 280  
TAACATCCCTGCTGGAGCTGTTCAACGACGTGCCGCCGCCAGCTGCTGCTGAACTGCCGCCCTGGCTCGCAGCCTCTGGCGGGACCTCATCGAC  
290 300 310 320 330 340 350 360 370  
CTCCTGACCCCTCTGGAAACGCAAGTGCCTGCGAAGGGCTTCATCACCAAGGACTGGGACCAGCCCGTGGCCGACTGGAAAATCTCTACTTCC  
380 390 400 410 420 430 440 450 460 470  
TACGGAGCCTGCATAGGAACCTCTGCCAACCGTGTGCTGAAAACGATAATGTTGCATGGCAAATTGATTCAATGGTGGGACCCGCTGGAA  
480 490 500 510 520 530 540 550 560  
GGTGGATGCCCTGGAGCCCACGGGACAGAAATTCTGACCCCAAGTCAGAAAGTCTTTGTCACATCCCTACGAACGTGCTCAAGTGG  
570 580 590 600 610 620 630 640 650  
GAGCTGGTGGACCTCTAGCCGACCGCTACTGGGAGGAGCTACTAGACACATTCGGCCGGACATCGTGGTTAAGGACTGGTTGCTGCCAGAG  
660 670 680 690 700 710 720 730 740 750  
CCGACTGTGGCTGCCACTACCAACTCAAAGTGCAGCTGGCTCGGTGACTACTTCGTGTTGGCCCTCCCTCGAGCCCCCACCTGTGACCATCCA  
760 770 780 790 800 810 820 830 840  
ACAGTGGAAACAATGCCACATGGACAGAGGTCTCTCACCTCTCAGACTACCCCCGGGGTGTCGGCTACATCCTCTTCCAGCATGGGGCAGG  
850 860 870 880 890 900 910 920 930 940  
GACACCCAGTACTGGCAGGCTGGTATGGGCCCCGAGTCACCAACAGCAGCATTGCGTCAGCCCCAAGATGACAGGAAACCAGGCTCGTCC  
950 960 970 980 990 1000 1010 1020 1030  
AGGCTCAGCTGGCAGAACATGGACAGGAGGCTGCCCAATGCCCTACGGAGCTGTTGTCAGATTCTGACAGCTGTCATCCCTG  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
TCTGGTCAGGCAGAGGTCTCTCCAGGCAGGAGCTGACCATGGGTGGCACTGAGGTCCCTGACCGAGCTCTGCCCGGTTCAACCCCA  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
CCAGCTTGTTGTAACCTACTGTACACATAGCTCTGACGTTTGTGTAATAATGTTTCAGGCCGGGACTGTGGCTCACGCCCTGTAATCCAG  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
CACTTGGAGACCGAGGCAAGGTGGATCACGAGGACAGAGACCATCTGGCCAACAGGTGAAACCCCTGTCTACTAAAAAATACAA  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
AAAATTAGCCGGCGTGGTGGCGGGCGCTGTACTCCAGCTACTCGGGAGGCTGATGCCAGAACATGGGTGAACCCGGAAAGGCAGAGCTG  
1420 1430 1440 1450 1460 1470 1480 1490 1500  
AGTGAGCCGAGATCACGCCACTGCACCTCCAGGCCCTGGTACAGAGCGAGACTCTGGCTCATAAAAATAATAATAATAATAATA  
1510 1520 1530  
AATGGTTTCAGTAAAAAAAAAAAAAA

FIG. 9B

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10	20	30	40	50	60
MSNTRFTITLNYKDPLTGDEETLASYGIVSGDLICLILHDDIPPPNIPSSTDSEHSSLQN					
70	80	90	100	110	120
NEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSMGLGPSQNFEAESTIQDNAHMAEG					
130	140	150	160	170	180
TGFYPSEPLLCSSESVEGQVPHSLETLYQSADCSDANDALIVLIHLLMLESGYIPQGTEAK					
190	200	210	220	230	240
ALSLPEKWKLSGVYKLQYMHHLCLEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLL					
250	260	270	280	290	300
PESFICKEKLGENVANIYKDLQKLSRLFKDQLVYPLLAFTTRQALNLPNVFGLVVLPLEK					
310	320	330	340	350	360
LRIFRLLDVRSVLSLSAVCRDLFTAENDPLLWRFLYLRDFRDNTVRVQD TDWKELYRKRH					
370	380	390	400	410	420
IQRKESPKGRFVLLLPSSSTHTIPFYPNPLHPRPFPPSRLLPGIIGGEYDQRPTLPYVGDP					
430	440	450	460	470	480
ISSLIPGPGETPSQLPPLRPRFDVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLS					

FM

FIG. 10A

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10 20 30 40 50 60 70 80 90  
TGGAAATCCCCATGGACCAATGCTAAATACCGATTACAATTACAGTAACTACAAGGATCCCCTCACTGGAGATGAAGAGACCTGGCTTCATA  
100 110 120 130 140 150 160 170 180  
TGGGATTGTTCTGGGGACTTGATATGTTGATTCTTCACGATGACATTCCACGGCTAATATACCTTCATCCACAGATTCAAGCATTCTCA  
190 200 210 220 230 240 250 260 270 280  
CTCCAGAACATGAGCAACCCCTTTGGCACCGCTCCAATCAGACTAGCATACAGGATGAACAACCAAGTGATTCAAGGCATATGGCAGGGAG  
290 300 310 320 330 340 350 360 370  
CCCAGTCTGGTGTGGAAATGACGCCAGTATGTTAGGGCTAGTCAAAATTTGAAGCTGAGTCATTCAAGATAATGCGCATATGGCAGAGGG  
380 390 400 410 420 430 440 450 460 470  
CACAGGTTCTATCCCTCAGAACCCCTGCTCTGTAGTGAATCGGTTGAGGGCAAGTGCACATTCAATTAGAGACCTTGTATCAATCAGCTGAC  
480 490 500 510 520 530 540 550 560  
TGTCTGATGCCAATGATGCCGTGATAGTGTGATACATCTCTCATGTGGAGTCAGGTTACATACCTCAGGGCACCGAAGCCAAGCAACTGT  
570 580 590 600 610 620 630 640 650  
CCCTGGGGAGAAGTGGAAAGTTGACGGGGGTATAAGCTGCACTACATGGCATCATCTCTGGAGGGCACTCCCTACTCTCACCTGTGTGCC  
660 670 680 690 700 710 720 730 740 750  
TTTGGGAAACCTGATTGTTGTAATGCTACACTAAAATCAACAATGAGATTAGAAGTGTGAAAAGATTGAGCTGCTACCAGAAATCTTTATT  
760 770 780 790 800 810 820 830 840  
TCCAAAGAGAAAATAGGGAAAAATGAGCCAAACATATACAAAGATCTCAGAAACTCTCTCGCCCTTTAAAGACCAGCTGGTGTATCCTCTTC  
850 860 870 880 890 900 910 920 930 940  
TGGCTTTACCCGACAAGCACTGAACCTACCAATGATTGGTTGGTCGTCCTCCATTGAAACTGAAACTACGGATCTCCGACTCTGGAA  
950 960 970 980 990 1000 1010 1020 1030  
TCTTCGTTCCGCTTGTCTTGTCTGGGTTTGTCTGCGCTTACTGCTTCAAATGACCCACTCTGTGGAGGTTTTATATCTGCGTGAT  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
TTTCGAGACAATACTGTCAGAGTCAAGACACAGATTGAAAGAACTGTACAGGAAGAGGGCACATACAAAGAAAAGAATCCCCGAAAGGGCGGT  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
TTGTGCTGCTCCCTGCCATCGTCAACCCACACCATCTATCCAAACCCCTGCACCCTAGGCCATTCTAGCTCCCGCTTCCCTCAGG  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
AATTATGGGGTGAATATGACCAAAGACCAACACTCCCTATGTTGGAGACCCAACTGAGTCATCTCTGGTCTGGAGACGCCAG  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
CAGTTACCTCCACTGAGACCACCGTTGATCCAGTTGGCCACTTCCAGGACCTAACCCCATCTGGCAGGGCGAGGGGGCCCAATGACAGAT  
1420 1430 1440 1450 1460 1470 1480 1490 1500  
TTCCCTTTAGACCCAGCAGGGGTGGCCAACTGATGGGGCTGTCAATTGATGTGATTGATTGATTTCTGGAGCTCCATTGTT  
1510 1520 1530 1540 1550 1560 1570 1580 1590  
TGTTCATAACTACAGATGTCACTCCCTGGGGTGTGATCTGAGTGTATTCTGATGTGATTGAGAGTTCACCTCCAGAAACCTTTT  
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690  
AAGAGATACTTATAGCCCTACGGGTGTGATGACCCAAAGGTCCCTGTGACAAGGTTGGCCTTGGGAATAGTTGGCTGCCAATCTCCCTGC  
1700 1710 1720 1730 1740 1750 1760

FIG. 10B

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10            20            30            40            50            60  
ETSKLG\*SAVLAPAAGGTLssegrSAVGILIAVTSTGVDK\*SLNQLLHGLGTSSRLSHF

70            80            90            100          110          120  
PFG\*KSPPRGQFVAAVEIAGRSGLQMGGQLWRVVRNQQLQQEGYSEQGYLTREQSRRMA

130          140          150          160          170          180  
ASNISNTNHRKVQGGIDIVHILLKARKSKEQEGFINLEMLPPPELSFTILSYLNATDLCLA

190          200          210          220          230          240  
SCVWQDLANDELLWQGLCKSTWGHCSIYNKNPPLGF SFRKX YMQ LDEGS LT FNAN PDEGV

250          260          270          280          290          300  
NYFMSKGILDDSPKEIAKFIFCTRNLNWKKLRIYLDERRDVLDLVTLHNFRNQFLPNAL

310          320          330          340          350          360  
REFFRHIAPEERGEYLETLITKFSHRCACNPDL MRELGLSPDAVY VLCYSLILL SIDL

370          380          390          400          410          420  
TSPHVKNKMSKREFIRNTRRAAQNISEDFVGHL YDN IYLIGHVAA\*KAQLLGLQFLL QTK

430          440          450          460          470          480  
ATQGLSRYGGYISAGHC SLSIQSSFSVQPFFLLPFSILVISLGN\*IILQNFS\*FCLSRFA

490          500          510          520          530          540  
QSRATV\*HSC\*RMIN\*HYTLKDGVFVH\*ICLK NFIHFHS LYKYHVMCTYL TKEIYSHNYF

550          560          570          580          590          600  
IVKILTKVFPFLSN\*VLKFI\*F\*SETIVXVKVRSDFRQKPIPASFSFKL\*RVLICYYITM

610          620          630          640          650  
QNWLQFL\*YKFII\*FFILKTGLIKSR\*VL\*TI\*DF\*NIKIYDLHS\*E\*NKIXLELW

FIG. 11A

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10 20 30 40 50 60 70 80 90  
GGAAACGTCAAAATTGGGATAGTCGGCAGTTCTGGCCCTGCAGCTGGAGGTACCTGAGTTCTGAGGGTCTGAGTTCTGTTCTGTTCTC  
100 110 120 130 140 150 160 170 180  
ATCGGGTCACTCTACCGGTGGACAAGTAAGTTGAATCAGCTCTCCATGCCCTGGGACCAGTCCCGCTGAGCCATTTCCTTTG  
190 200 210 220 230 240 250 260 270 280  
GCTAAAAGTCCCCCCCAGAGGCCAATTGTCGGCCGGGGTGGAGATCGCAGGTGCTCAGGCTTGAGATGGTCAAGGGTTGGAGAGT  
290 300 310 320 330 340 350 360 370  
GGTCAGAAACCCAGCAGCTGCAACAAGAAGGCTACAGTGAGCAAGGCTACCTCACCAAGAGAGCAGACAGGAGAATGGCTGGAGCAACATTCT  
380 390 400 410 420 430 440 450 460 470  
AACACCAATCATGTAACAAAGTCCAAGGAGGATTGACATATACTATCTTTGAAGGCAAGGAATCGAAAGAACAGGAAGGATTCAATT  
480 490 500 510 520 530 540 550 560  
TGGAAATTTGCCCTCTGAGCTAACGTTTACCATCTTGTCTTACCTGAAATGCAACTGACCTTTGCTTGGCTTATGTTGGCAGGACCTTGC  
570 580 590 600 610 620 630 640 650  
GAATGATGAACTCTCTGGCAAGGGTTGTGCAAATCCACTTGGGTCACTGTTCCATATAACAATAAGAACCCACCTTGGGATTTCTT  
660 670 680 690 700 710 720 730 740 750  
AAAKTGTATATGCACTGGATGAAAGGCAGCCTCACCTTAATGCCAACCCAGATGAGGGAGTGAACACTTATGTCACAGGTTATCTGGATG  
760 770 780 790 800 810 820 830 840  
ATTCGCCAAAGGAAATAGCAAAGTTATCTCTGTACAAGAACACTAAATTGGAAAAACTGAGAACTATCTTGTAAAGGAGAGATGTCTT  
850 860 870 880 890 900 910 920 930 940  
GGATGACCTTGTAACTTCCATAATTAGAATTCAGTTCTTGCAAATGCACTGAGAGAAATTTCGTCAATATCCATGCCCTGAAGAGCGT  
950 960 970 980 990 1000 1010 1020 1030  
GGAGAGTATCTGAAACTCTTATAACAAAGTTCTCACATAGATTCTGCTTGCACCCCTGATTAAATGCCAGAACTTGGCCTTAGTCCGTGATG  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
CTGTCTATGTACTGTGCTACTCTTGATTCTACTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATGTCAAAAGGGAAATTATTG  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
AAATACCCGTCGGCTGCTCAAAATTAACTGAAAGATTGTAGGGCATCTTATGACAATATCTACCTTATGCCATGTGGCTGCATAAAA  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
GCACAAATTGCTAGGACTTCAGTTTACTTCAGACTAAAGCTACCCAGGACTTAGCAGATATGGGGTACATCAGTGCTGGTCAATGAGCC  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
TGAGTATAACATCAAGCTTCAGTGTGCAACCTTTTCTTGTGCAATTAGTAACTTGGGGAAACTAAATAATTGAGAA  
1420 1430 1440 1450 1460 1470 1480 1490 1500  
TTTTCTCTAATTGTTATCACGTTTGACAAAGCAGGCCACTGCTAACACAGCTGTAACAGTGAAGAATGATAACTGACATTACTCTAAA  
1510 1520 1530 1540 1550 1560 1570 1580 1590  
GATGGTGTATTGTCCTTGTGCTGCAAAACTTATCCATTCTTATACAAATACCTGTAATGTGACATATTAACTAAAG  
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690  
AGATTATAGTCATAATTATTGTAAGATTAACTAAAGTTCTCTCAAACGTTGAGTTCTGAAATTATTGATCTGATC  
1700 1710 1720 1730 1740 1750 1760 1770 1780  
TGAAACTATTGTCYGTAAAAGTTAGATCTGACTTCAGRCAGAAACCAATACCAGCTCCCTTCTTAACTTGAAGAGTGTGATTG  
1790 1800 1810 1820 1830 1840 1850 1860 1870 1880  
TACTATATTACTATGCCAAACTGGCAGTTATTATAATATAAAATTATAATTGATTTTTAAACTGGGTTAATCAAGTCGGT  
1890 1900 1910 1920 1930 1940 1950 1960 1970  
AAGTCCCTTAAACCATTTAGGATTAAACATCAAATTATGATTACATTGAGAAATAAAATAATYATTGAAACTCTGGT

FIG. 11B

10            20            30            40            50            60  
MAAAAVDSAMEVVPALAEAAPEVAGLSCLVNLPGEVLEYILCCGSLTAADIGRVSSTCR

70            80            90            100          110          120  
RLRELCQSSGKVWKEQFRVRWPSLMKHYSPTDYVNWLEEYKVRQKAGLEARKIVASFSKR

130          140          150          160          170          180  
FFSEHVPNCNGFSDIENLEGPEIFFEDELVCILNMEGRKALTWKYYAKKILYYLRQQKILN

190          200          210          220          230          240  
NLKAFLQQPDDYESYLEGAVYIDQYCNPLSDISLKDIQAQIDSIVELVCKTLRGINSRHP

250          260          270          280          290          300  
SLAFKAGESSMIMEIELQSQVLDAMNYVLYDQLKFKGNRMDYYNALNLYMHQVLIRRTGI

310          320          330          340          350          360  
PISMSLLYLTIAQRQLGVPLEPVNFPSHFLRWQCQGAEGATLDIFDYIYIDAFGKGKQLTV

370          380          390          400          410          420  
KECEYLIGQHVTAALYGVNVKKVLQRMVGNLLSLGKREGIDQSYQLLRSQQLDLYLAMYP

430          440          450          460          470          480  
DQVQLLLLQARLYFHLDGIWPEKVLDILQHIQTLDPGQHGAVGYLVQHTLEHIERKKEEVG

490          500          510          520          530          540  
VEVKLRSDEKHRDVCVSIGLIMKHKRYGYNCVIYGWDPTCMMGHEWIRNMNVHSLPHGHH

550          560          570          580          590          600  
QPFYNVLVEDGSCRYAAQENLEYNVEPQEISHPDVGRYFSEFTGTHYIPNAELEIYPED

610          620  
LEFVYETVQNIYSAKKENIDE

FIG. 12A

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FIG. 12B

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10

20

30

40

50

60

RSTGFRRAGEEWSR\*XLAASPGXLRRPAXTFVLSNLAEVVERVLTFLPAKALLRVACVCR

70

80

90

LWRECVRRVLRTHRSVTWISAGLAEAGHLXGH

FIG. 13A

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10            20            30            40            50            60  
CCGTAGTACTGGNTTCCGGCGGGCTGGTGAGGAATGGAGGCCGGTAGNTGCTGCAGCGAG  
  
70            80            90            100          110          120  
TCCCGGGNTCCTCCGTAGACCCGGANACCTTCGTGTTGAGTAACCTGGCGGAGGTGGT  
  
130          140          150          160          170          180  
GGAGCGTGTGCTCACCTCCTGCCGCCAAGGCATTGCTGCAGGTGGCCTGCCTGCGTGTGCCG  
  
190          200          210          220          230          240  
CTTATGGAGGGAGTGTGTGCGCAGAGTATTGCGGACCCATGGAGCGTAACCTGGATCTC  
  
250          260          270  
CGCAGGCCTGGCGGAGGCCACCTGGNGGGCATT

FIG. 13B

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10            20            30            40            50            60  
 RPRPVQQQQQQPPQQPPPQQQPQQQQPPQQQQQQQQPPPPPPQQQQQQQQPPPPPPPPPLPQERNNVG  
 70            80            90            100          110          120  
 ERDDDVPAADMVAEESGPAGAQNSPYQLRRKTLLPKRTACPTKNSMEGASTSTTENFGHRAK  
 130          140          150          160          170          180  
 RARVSGKSQDLSAAPAEQYLQEKL PDEVVLKIFSYLLEQDLCRAACVCKRFSELANDPNL  
 190  
 WKRLYMEVFEYTRPMMH

FIG. 14A

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10            20            30            40            50            60  
CGGGCCGCGCCCGGTGCAGCAACAGCAGCAGCAGCCCCCGCAGCAGCCGCCGCCAGCC

70            80            90            100          110          120  
GCCCCAGCAGCAGCCGCCAGCAGCAGCAGCCTCCGCCGCCAGCAGCAGCAGCAGCA

130          140          150          160          170          180  
GCAGCCTCCGCCGCCGCCACCGCCGCCTCCGCCGCTGCCTCAGGAGCGGAACAACGTCGG

190          200          210          220          230          240  
CGAGCGGGATGATGATGTGCCTGCAGATATGGTTGCAGAAGAACAGGTCTGGTGCACA

250          260          270          280          290          300  
AAATAGTCCATACCAACTTCGTAGAAAAACTCTTTGCCGAAAAGAACAGCGTGTCCCAC

310          320          330          340          350          360  
AAAGAACAGTATGGAGGGCGCCTCAACTTCAACTACAGAAAACCTTGTCATCGTGCAA

370          380          390          400          410          420  
ACGTGCAAGAGTGTCTGGAAAATCACAAAGATCTATCAGCAGCACCTGCTGAACAGTATCT

430          440          450          460          470          480  
TCAGGAGAAACTGCCAGATGAAGTGGTTCTAAAATCTCTCTTACTTGCTGGAACAGGA

490          500          510          520          530          540  
TCTTGAGAGCAGCTGTATGTAAACGCTTCAGTGAACCTGCTAATGATCCAATT

550          560          570          580          590  
GTGGAAACGATTATATGGAAGTATTGAATATACTCGCCCTATGATGCAT

FIG. 14B

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(SHEET 27 OF 80)

10	20	30	40	50	60
RPRPGLRGGRAPCEVTMEAGGLPLELWRMILAYLHLPDLGRCSLVCRAYELILSLDSTR					
70	80	90	100	110	120
WRQLCLGCTECRHPNWPNQPDVEPESWREAFKQHYLASKTWTKNALDLESSICFSLFRRR					
130	140	150	160	170	
RERRTLSVPGPGREFDSLGSALAMASLYDRIVLFPGVYEEQGEIILKVPVEIVGQGKLG					

**FIG. 15A**

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10            20            30            40            50            60  
CGGGCCGCGGCCGGACTCCGC GG TG GGGCAGCGCCCTGTGAGGTGACCATGGAGGCTGG

70            80            90            100          110          120  
TGGCCTCCCTGGAGCTGTGGCGCATGATCTTAGCCTACTTGCA CCTTCCC GACCTGGG

130          140          150          160          170          180  
CCGCTGCAGCCTGGTATGCAGGGCCTGGTATGA ACTGATCCTCAGTCAGCACAGCACCCG

190          200          210          220          230          240  
CTGGCGGCAGCTGTGTCTGGTTGCACCGAGTGCCGCCATCCAATTGGCCCAACCAGCC

250          260          270          280          290          300  
AGATGTGGAGCCTGAGTCTGGAGAGAAGCCTCAAGCAGCATTACCTTGCA TCCAAGAC

310          320          330          340          350          360  
ATGGACCAAGAACATGCCTTGGACTTGGAGTCCTCCATCTGCTTTCTCTATTCCGCCGGAG

370          380          390          400          410          420  
GAGGGAACGACGTACCCCTGAGTGTGGCCAGGCCGTGAGTTGACAGCCTGGCAGTGC

430          440          450          460          470          480  
CTTGGCCATGCCAGCCTGTATGACCGAATTGTGCTCTCCAGGTGTACGAAGAGCA

490          500          510          520          530  
AGGTGAAATCATCTTGAAGGTGCCTGTGGAGATTGTAGGGCAGGGGAAGTTGGGTGA

FIG. 15B

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10	20	30	40	50	60
ETETAPLTESLPTDPLLLILSFLDYRDLINCCYVSRRLSQLSSHPLWRRHCKYWLI					
70	80	90	100	110	120
EEEKTQKNQCWKSLFIDTYSDVGRYIDHYAAIKKASGMISRNIWSPGVLGWVL					
130	140	150	160	170	180
RGRPRCCGSADWAASFLLDDYRCSYRIHNGQKLVGSWGYWEAWHCLITIVLKIC*TSIQLP					
190	200	210	220	230	240
EIPAETGTEILSPFNFCIHTGLSQYIAVEAAEG*NKNEVFYQCQTVERVFKYGIKMCSDG					
250					
CINGMH*VFS					

**FIG. 16A**

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10            20            30            40            50            60  
GAGACCGAGACGGCGCCGCTGACCCCTAGAGTCGCTGCCACCGATCCCCTGCTCCTCATC

70            80            90            100          110          120  
TTATCCTTTTGAACTATCGGGATCTAATCAACTGTTGTTATGTCAGTCGAAGAGATTAAGC

130          140          150          160          170          180  
CAGCTATCAAGTCATGATCCGCTGTGGAGAACAGACATTGCAAAAAAAACTGGCTGATATCT

190          200          210          220          230          240  
GAGGAAGAGAAAACACAGAAGAACATCAGTGTGGAAATCTCTCTCATAGATACTTACTCT

250          260          270          280          290          300  
GATGTAGGAAGATAACATTGACCATTATGCTGCTATTAAAAAGGCCTCGGGAAATGATCTCA

310          320          330          340          350          360  
AGAAATATTGGAGCCAGGTGTCCTCGGATGGGTTTATCTCTGAAAGAGGGGTGCTCG

370          380          390          400          410          420  
AGAGGAAGACCTCGATGCTGTGGAAAGCGCAGATTGGGCTGCAAGTTCCCTGGACGATTAT

430          440          450          460          470          480  
CGATGTTCATACCGAATTACAATGGACAGAAGTTAGTTGGTTCTGGGTTATTGGGAA

490          500          510          520          530          540  
GCATGGCACTGTCTAACATCACTATCGTTCTGAAGATTGTTAGACGTCGATACAGCTGCCG

550          560          570          580          590          600  
GAGATTCCAGCAGAGACAGGGACTGAAATACTGTCTCCCTTAACCTTGCATACATACT

610          620          630          640          650          660  
GGTTTGAGTCAGTACATAGCAGTGGAAAGCTGCAGAGGGTTGAAACAAAATGAAGTTTC

670          680          690          700          710          720  
TACCAATGTCAGACAGTAGAACGTGTGTTAAATATGGCATTAAAGATGTGTTCTGATGGT

730          740          750  
TGTATAAATGGCATGCATTAGGTATTTCAAG

FIG. 16B

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(SHEET 31 OF 80)

10            20            30            40            50            60

CSGF RAGG WP LT MP GK HQ HF Q E P E V G C C G K Y F L F G F N I V F W V I L G A L F L A I G L W A W G E K G V

70            80            90            100          110          120

L S N I S A L T D L G G L D P V W L V C G S W R R H V G A G L C W A A I G A L R E N T F L L K F F X X F L G L I F F L E

LA

FIG. 17A

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(SHEET 32 OF 80)

10            20            30            40            50            60  
GGCTCCGGTTTCCGGGCCGGCGGGTGGCCGCTCACCATGCCCGGNAAGCACCAGCATTTC

70            80            90            100          110          120  
CAGGAACCTGAGGTGGCTGCTGCAGGGAAATACTTCCTGTTGGCTTCAACATTGTCTTC

130          140          150          160          170          180  
TGGGTGCTGGGAGCCCTGTTCCCTGGCTATCGGCCTCTGGGCCTGGGGTGAGAAGGGCGTT

190          200          210          220          230          240  
CTCTCGAACATCTCAGCGCTGACAGATCTGGGAGGCCTTGACCCCGTGTGGCTTGTGTTGT

250          260          270          280          290          300  
GGTAGTTGGAGGCCGTCAATGTCGGTGGCTGGGCTTGCTGGGCTGCAATTGGGCCCTCCGG

310          320          330          340          350          360  
GAGAACACCTTCCTGCTCAAGTTCTNCNGNTTCCTCGGTCTCATCTTCTCCTGGAG

CTGGCAAC

FIG. 17B

5914-046

(SHEET 33 OF 80)

10            20            30            40            50            60  
AAAAAAAYLDELPEPLLRVLAALPAAELVQACRLVCLRKEVLVDGAPLWLLKCQQEGLVP

70            80            90            100          110          120  
EGGVVEERDHWQQFYFLSKRRRNLLRNPGEEDLEGWCDVEHGGDGWRVEELPGDGVF

130          140          150          160          170          180  
THDESVKKYFASSFEWCRKAQVIDLQAEGYWEELLDTTQPAIVVKDWYSGRSDAGCLYEL

190          200          210          220          230          240  
TVKLLSEHENVLAEFSSGQVAVPQDS DGGGWMEISHTFTDYGP GVRFVRFEHGGQGSVY

250  
KGWFGARVTNSSVWEP\*

FIG. 18A

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10 20 30 40 50 60  
GCGGCGGCCGCCGCGTACCTGGACGAGCTGCCGAGCCGCTGCTGCTGCGCTGGCCGACTG  
  
70 80 90 100 110 120 130  
CCGGCCGCCGAGCTGGTGCAGGCCCTGCCGCTGGTGTGCCCTGCGCTGGAAGGAGCTGGTGGACGGCGCC  
  
140 150 160 170 180 190 200  
CCGCTGTGGCTGCTCAAGTGCCAGCAGGAGGGCTGGTGCCCCAGGGCGCGTGGAGGAGGAGCGCGAC  
  
210 220 230 240 250 260 270  
CACTGGCAGCAGTTCTACTTCCTGAGCAAGCGGCCGCAACCTTCTGCGTAACCGTGTGGGAAGAG  
  
280 290 300 310 320 330 340  
GACTTGGAAAGGCTGGTGTACGTGGAGCATGGTGGGGACGGCTGGAGGGTGGAGGAGCTGCCTGGAGAC  
  
350 360 370 380 390 400 410  
AGTGGGGTGGAGTTACCCACGATGAGAGCGTCAAGAAGTACTTCGCCTCCTCTTGAGTGGTGTGCG  
  
420 430 440 450 460 470 480  
AAAGCACAGGTCAATTGACCTGCAGGCTGAGGGCTACTGGGAGGAGCTGGACACGACTCAGCCGGCC  
  
490 500 510 520 530 540 550  
ATCGTGGTGAAGGACTGGTACTCGGCCGCAGCGACGCTGGTTGCCCTACGAGCTACCGTTAACGCTA  
  
560 570 580 590 600 610 620  
CTGTCCGAGCACGAGAACGTGCTGGCTGAGTTAGCAGCGGGCAGGTGGCAGTGCCCCAACGACAGTGAC  
  
630 640 650 660 670 680 690  
GGCGGGGGCTGGATGGAGATCTCCCACACCTTCACCGACTACGGGCCGGCGTCCGCTCGTCCGCTTC  
  
700 710 720 730 740 750  
GAGCACGGGGGGCAGGGCTCCGTCTACTGGAAGGGCTGGTTGGGGCCGGTGACCAACAGCAGCGTG  
  
760 770  
TGGGTAGAACCTGA

FIG. 18B

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10	20	30	40	50	60
MGEKAVPLLRRRRVKRSCPSCGSELGVEEKRGKGKGNPISIQLFPPELVEHIISFLPVRLV					
70	80	90	100	110	120
ALGQTCRYFHEVCDGEGVWRRICRRLSPRLQDQDTKGLYFQAFGGRRCLSKSVAPLLAH					
130	140	150	160	170	180
GYRRFLPTKDHVFILDYVGTLFFLKNALVSTLGQMOWKRACRYVVLCRGAKDFASDPRCD					
190	200	210	220	230	240
TVYRKLYVLATREPQEVVGTSSRACDCVEVYLQSSGQRVFKMTFHHSMTFKQIVLVGQ					
250	260	270	280	290	300
ETQRALLLTEEGKIYSLVVNETQLDQPRSYTQQLALRKVSHYLPHLRVACMTSNQSSTL					
310					
YVTDPILCSWLQPPWPAG					

FIG. 19A

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10 20 30 40 50 60  
ATGGGCGAGAAGGCGGTCCCTTGTAAGGAGGAGGCAGGTGAAGAGAAAGCTGCCCTTCTTGTGGCTCG  
70 80 90 100 110 120 130  
GAGCTTGGGGTTGAAGAGAAAGAGGGGAAAGGAAATCCGATTCCATCCAGTTGTTCCCCCAGAGCTG  
140 150 160 170 180 190 200  
GTGGAGCATATCATCTCATTCCCTCCCAGTCAGAGACCTTGTGCCCCCGCCAGACCTGCCGCTACTTC  
210 220 230 240 250 260 270  
CACGAAGTGTGCGATGGGAAGGCGTGTGGAGACGCATCTGTCGCAGACTCAGTCCGCGCCTCCAAGAT  
280 290 300 310 320 330 340  
CAGGACACGAAGGGCTGTATTCAGGCATTGGAGGCCGCCGATGTCTCAGCAAGAGCGTGGCC  
350 360 370 380 390 400 410  
CCCTTGCTAGCCCACGGCTACCGCCGTTCTTGCCCACCAAGGATCACGTCTTCATTGACTACGTG  
420 430 440 450 460 470 480  
GGGACCCCTTCTCCTCAAAAATGCCCTGGTCTCACCCCTGGCCAGATGCAGTGGAAAGCGGCCCTGT  
490 500 510 520 530 540 550  
CGCTATGTTGTTGTCGTGGAGCCAAGGATTTGCCTCGGACCCAAGGTGTGACACAGTTACCGT  
560 570 580 590 600 610 620  
AAATACCTTACGTCTGGCCACTCGGAGCCAGGAAGTGGTGGTACCAACCAGCAGCCGGCCTGT  
630 640 650 660 670 680 690  
GACTGTGTTGAGGTCTATCTGCAGTCTAGTGCCAGCGGGCTTCAAGATGACATTCCACCACTCAATG  
700 710 720 730 740 750  
ACCTTCAAGCAGATCGTCTGGTGGTCAGGAGACCCAGCGGGCTACTGCTCCTCACAGAGGAAGGA  
760 770 780 790 800 810 820  
AAGATCTACTCTTGGTAGTGAATGAGACCCAGCTGACCAGCCACGCTCCTACACGGTTCAAGCTGGCC  
830 840 850 860 870 880 890  
CTGAGGAAGGTGTCCCACCTACCTGCCTCACCTGCGCTGGCTGCATGACTTCAAACCAGAGCAGCACC  
900 910 920 930 940 950  
CTCTACGTACAGATCCTATTCTGTGCTCTTGGCTACAACCACCTGGCCTGGTGGATGA

FIG. 19B

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10            20            30            40            50            60  
RGGSEGRGRGREKRARGARRRKQGGREARAADGEGGSGPGAEAGARTRPREEAEGGGSV

70            80            90            100          110          120  
EEGARGIIKGDEGSVGAGKEAQGRKYGKEEWRVRARRREGARPGRVQGQGGQVWAYIPGT

130          140          150          160          170          180  
GAAMAAAAREEEEEAARESAACPAAGPALWRLPEVLLLHMC SYLDMRALGRLAQVYRWLW

190          200          210          220          230          240  
HFTNCDLLRRQIAWASLN SGFTRLGTNLMTSVPVKVSQNIVGCCREGILLKWRCSQMPW

250          260          270          280          290          300  
MQLEDDALYISQANFILAYQFRPDGASLN RQPLGV SAGHDEDVCHFVLATSHIVSAGGDG

310          320          330          340          350          360  
KIGLGKIHKSTFAAKYWAHEQEWN CVDCKGGIISFGSRDRTAKVWPLASGQLGQCLYTIQT

370          380          390          400          410          420  
EDQIWSVAIRPLLSSFVTGTACCGHFSPLKIWDLNSGQLMTHLD RDFPPRAGVLDVIYES

430          440          450          460          470          480  
PFALLSCGYDTYVRYWDCRTSVRKCVMEEEPINSTLYCLQTDGNHLLATGSSFYSVVRL

490          500          510          520          530  
WDRHQRCAPHTFPLTSTR LGSPVYCLHLT KHL YAALSYNLHVLDI QNP\*

FIG. 20A

10 20 30 40 50 60 70 80 90  
 CGAGGGGAAGCGAAGGAACGGGAAGAGGAACGGAAAGCGAGCGAGAGGGGCAAGGCCAAGAGGAAGCAGGGCGGAAGGGAGCCGGCG  
 100 110 120 130 140 150 160 170 180  
 CAGACGGCGAAGGAGGCAGCGGGGGCTGAGGCGGGAGCGAGGACACGCCAAGAGAGGAAGCAGAGGGAGGCCAAGCTGGAGGAAGG  
 190 200 210 220 230 240 250 260 270 280  
 GCGAGAGGCATCATCAAAGGAGATGAGGGGAGCGTAGGGGCCGGAAAGAGGCACAAGGAAGAAAGTATGGGAAGGAGGAATGGAGGGTCAGG  
 290 300 310 320 330 340 350 360 370  
 CCTAGGGCGGGAGGGCGCCAGGCCGGAAAGAGTACAAGGACAAGGAGGTCAAGTTGGGCTACATCCCAGGGACAGGGCGGCCATGGCG  
 380 390 400 410 420 430 440 450 460 470  
 CGGCAGCCAGGGAGGGAGG  
 480 490 500 510 520 530 540 550 560  
 CCTGCACATGTGCTCTACCTCGACATGCCGCCCTGGCGCTGGCCAGGTGTACCGCTGGCTGTCACCAACTTCACCGCACCTGCTG  
 570 580 590 600 610 620 630 640 650  
 CGGGCCAGATAGCCTGGCCTCGCTCAACTCCGCCCTACCGCGCTCGGACCAACCTGATGACCAGTGTCCAGTGAAAGGTGTCTCAGAAC  
 660 670 680 690 700 710 720 730 740 750  
 GGATAGTGGGTGCTCCGAGAGGGATTCTGCTGAAGTGGAGATCCAGTCAGATGCCCTGGATGCAAGAGGTATGCTTTGTACATATC  
 760 770 780 790 800 810 820 830 840  
 CCAGGCTAATTCTACCTGGCCTACCACTGGCTCAGATGGTCCAGATGGTCCAGCTGAACCGTCAGCCTCTGGAGTCTCTGCTGGCATGAGGAC  
 850 860 870 880 890 900 910 920 930 940  
 GTTGGCCACTTGTGCTGGCACCTCGCATATTGTCACTGGAGGAGATGGAAAGATTGGCCTGGTAAGATTACAGCACCTTCGCTGCCA  
 950 960 970 980 990 1000 1010 1020 1030  
 AGTACTGGGCTCATGAAACAGGAGGTGAAGTGTGCTGGATTGCAAAGGGGCATCATATCATTGGCTCCAGGGACAGGACGGCAAGGTGTGCC  
 1040 1050 1060 1070 1080 1090 1100 1110 1120  
 TTGGCCTCAGGCCAGCTGGGCAGTGTGTTATACACCATCAGACTGAAGACCAAATCTGGCTGTGCTATCAGGCCATTACTCAGCTCTTT  
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
 GTGACAGGGACGGCTGTGTTGGCACTTCACCCCTGAAAATCTGGACCTCAACAGTGGCAGCTGATGACACACTTGGACAGAGACTTTC  
 1230 1240 1250 1260 1270 1280 1290 1300 1310  
 CCCCCAAGGGCTGGGTGCTGGATGTCATATGAGTCCCCTTCCGACTGCTCTCTGTGGCTATGACACCTATGTCGCTACTGGACTGCC  
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
 CACCACTGTCCGAAATGTGTCATGGAGTGGAGGAGCCCCAACACGCCACCTGTACTGCCCTGCAACAGATGGCAACCACCTGGCTGCCACA  
 1420 1430 1440 1450 1460 1470 1480 1490 1500  
 GGTTCCCTCTATAGCGTTGTACGGCTGTGGAGGGACCCGACCAAGGGCTGCCACACCTTCCGCTGACGTCGACCCGCCCTCGGAGCC  
 1510 1520 1530 1540 1550 1560 1570 1580 1590  
 CTGTGACTGCCTGCATCTCACCAAGCATCTATGCTGCCCTGTCTTACAACCTCCACGTCCTGGATATTCAAAACCCGTGA

FIG. 20B

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10	20	30	40	50	60
LILTSVLLFQRHGYCTLGEAFNRLDSSAIQDIRTFNYVVKLLQLIAKSQLTSLSGVAQK					
70	80	90	100	110	120
NYFNILDKIVQKVLDHHNPRLIKDLLQDLSSSTLCILIRGVVGKSVLVGNINIICRLETI					
130	140	150	160	170	180
LAWQQQLQDLQMTKQVNNGLTLSDLPLHMLNNILYRFSDGWDIITLGQVTPTLYMLSEDR					
190	200	210	220	230	240
QLWKKLQCQYHFAEKQFCRHLILSEKGHIEWKLYFALQKHYPAKEQYGDTLHFCRHCSIL					
250	260	270			
FWKDSGHPCATAADPDSCFTPVSPQHFIDLFKF					

**FIG. 21A**

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10 20 30 40 50 60  
GCATTGCTATAATTTACTATACTCTCATCTAAATCTAAAATCAGTCTCAAAATAAAACAAATTGTC

70 80 90 100 110 120 130  
CTTGCCAAAAATTTTTAATCGACAATTAAATTGACATTAACTGCCAATTCTTTGGCTAATTGAC

140 150 160 170 180 190 200  
TAATTTAACCTCTGTGTTGCTTTCCAGAGGCATGGCTATTGCACCTTGGAGAACCTTTAACCGGT

210 220 230 240 250 260 270  
TAGACTTCTCAAGTGAATTCAAGATATCCGAACGTTCAATTATGTGGTCAAACACTGTTGCAGCTAATTG

280 290 300 310 320 330 340  
CAAAATCCCAGTTAACATTCAATTGAGTGGCGTGGCACAGAAGAATTACTCAACATTGGATAAAATCG

350 360 370 380 390 400 410  
TTCAAAAGGTTCTGATGACCACCAATCCTCGCTTAATCAAAGATCTCTGCAAGACCTAAGCTCTA

420 430 440 450 460 470 480  
CCCTCTGCATTCTTATTAGAGGAGTAGGGAAGTCTGTATTAGTGGAAACATCAATATTGGATTTGCC

490 500 510 520 530 540 550  
GATTAGAAACTATTCTGCCCTGGCAACAAACAGCTACAGGATCTCAGATGACTAAGCAAGTGAACAATG

560 570 580 590 600 610 620  
GCCTCACCCCTCAGTGACCTCCTCTGCACATGCTGAACAAACATCCTATACCGGTTCTCAGACGGATGGG

630 640 650 660 670 680 690  
ACATCATCACCTTAGGCCAGGTGACCCCCACGTTGTATATGCTTAGTGAAGACAGACAGCTGTGGAAGA

700 710 720 730 740 750  
AGCTTTGTCAGTACCATTTGCTGAAAAGCAGTTTGTAGACATTGATCCTTCAGAAAAAGGTCAATA

760 770 780 790 800 810 820  
TTGAATGGAAGTTGATGTACTTGCACCTCAGAAACATTACCCAGCGAAGGAGCAGTACGGAGACACAC

830 840 850 860 870 880 890  
TGCATTTCTGTCGGCACTGCAGCATTCTCTTTGGAAGGACTCAGGACAQCCCTGCACGGCGGCCGACC

900 910 920 930 940 950 960  
CTGACAGCTGCTTCACGCCCTGTCCTCCGCAGOACTTCATCGACCTCTCAAGTTTAAGGGCTGCC

970 980 990 1000 1010 1020 1030  
TGCCATCCCTATTGGAGATTGTGAATCCTGCTGTCTGTGCAGGGCTCATAGTGAGTGTCTGTGAGGTG

1040 1050 1060 1070 1080 1090 1100  
GGTGGAGACTCCTCGGAAGCCCTGCTCCAGAAAGCCTGGGAAGAACCTGCCCCCTGCAAAGGGGGGA

1110 1120 1130 1140 1150 1160 1170  
CTGCATGGTTGCATTTCACTGAAAGTCAGAGGCCAAGGAAATCATTCTACTCTTAAACACTC

1180 1190 1200 1210  
CTTCTAAGCATATTAAATGTGAAATTGCGTACTCTC

FIG. 21B

10            20            30            40            50            60  
YGSEGKGSSSISSDVSSSTDHTPTKAQKNVATSEDSDLMSMRTLSTPSPALICPPNLPGFQ

70            80            90            100          110          120  
NGRGSSTSSSSITGETVAMVHSPPPTRLTHPLIRLASRPQEQAISIDRLPDHSMVQIFSF

130          140          150          160          170          180  
LPTNQLCRCARVCRRWYNLAWDPRWLWRTIRLTGETINVDRALKVLTRRLCQDTPNVCLML

190          200          210          220          230          240  
ETVTVSGCRRLTDRGLYTIAQCCPELRRLEVSGCYNISNEAVFDVVSLCPNLEHLDVSGC

250          260          270          280          290          300  
SKVTCISLTREASIKLSPLHGKQISIRYLDMTDCFVLEDEGLHTIAAHCTQLTHLYLRRC

310          320          330          340          350          360  
VRLTDEGLRYLVIYCASIKECSVSDCRFVSDFGLREIAKLESRLRYLSIAHCGRVTDVGI

370          380          390          400          410          420  
RYVAKYCSKLRYLNARGCEGITDHGVEYLAKNCTKLKSLDIGKCPLVSDTGLECLALNCF

430          440          450          460          470          480  
NLKRLSLKSCESITGQGLQIVAANCFLQTLNVQDCEVSVEALRFVKRHCKRCVIEHTNP

AFF

FIG. 22A

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FIG. 22B

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10	20	30	40	50	60
AAAPAPAPAPTPTPEEGPDAGWGDRIPLEILVQIFGLLVAADGPMPFLGRAARVCRRWQE					
70	80	90	100	110	120
AASQPALWHTVTLSPLVGRPAKGGVKAEEKLLASLEWLMPNRFSQLQRLTЛИHWKSQVH					
130	140	150	160	170	180
PVLKLVGECCPRLTFLKLSGCHGVTADALVMLAKACCQLHSSDLQHSMVESTAVVSFLEE					
190	200	210	220	230	240
AGSRMRKLWLTYSSQTAILGALLGSCCPQLQVLEVSTGINRNSIPLQLPVEALQKGCPQ					
250	260	270	280		
LQVLRLLNLMWLPKPPGRGVAPPGFPSLEELCLASSTCNFVS					

FIG. 23A

10            20            30            40            50            60

TGCGGCCGCGCCCCGCACCCGCACCGGCACCCACGCCAACGCCCCAGGAAGGGCCCCACGCCGGCTGGGG

70            80            90            100          110          120          130

AGACCGCATTCCCTTGGAAATCCTGGTGCAGATTTCGGGTTGTTGGTGGCGGGACGGCCCCATGCC

140          150          160          170          180          190          200

CTTCCTGGCAGGGCTGCGCGCTGTGCCGCCCTGGCAGGAGGCCGCTTCCCAACCCGCGCTCTGGCA

210          220          230          240          250          260          270

CACCGTGACCCCTGTCGTCCCCGCTGGTCGGCCGCCCTGCCAAGGGCGGGGTCAAGGCGGAGAAGAAGCT

280          290          300          310          320          330          340

CCTTGCTTCCCTGGAGTGGCTTATGCCCAATCGGTTTCACAGCTCCAGAGGCTGACCTCATCCACTG

350          360          370          380          390          400          410

GAAGTCTCAGGTACACCCCGTGTGAAGCTGGTAGGTGAGTGCTGTCCCTCGGCTCACTTCCCTCAAGCT

420          430          440          450          460          470          480

CTCCGGCTGCCACGGTGTGACTGCTGACGCTCTGGTCATGCTAGCAAAGCCTGCTGCCAGCTCCATAG

490          500          510          520          530          540          550

CCTGGACCTACAGCACTCCATGGTGGAGTCCACAGCTGTGGTAGCTTCTGGAGGGAGGCAGGGTCCCG

560          570          580          590          600          610          620

AATGCGCAAGTTGTGGCTGACCTACAGCTCCCAGACGACAGCCATCCTGGCGCATTGCTGGCAGCTG

630          640          650          660          670          680          690

CTGCCCTCAGCTCCAGGTCTGGAGGTGAGCACCGGCATCAACCGTAATAGCATTCCCTCAGCTGCC

700          710          720          730          740          750

TGTCGAGGCTCTGCAGAAAGGCTGCCCTCAGCTCCAGGTGCTGCGGCTGTTGAAACCTGATGTGGCTGCC

760          770          780          790          800          810          820

CAAGCCTCCGGGACGAGGGTGGCTCCGGACCAGGCTCCCTAGCCTAGAGGGAGCTCTGCCCTGGCGAG

830          840          850

CTCAACCTGCAACTTTGTGAGC

FIG. 23B

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10            20            30            40            50            60  
QHCSQKDTAELLRGLSLWNHAEERQKKYSVDEKSDKEAEVSEHSTGITHLPPEVMLSI

70            80            90            100          110          120  
FSYLNQPQELCRCSQVSMKWSQLTKTGSWKHLYPVHWARGDWYSGPATLDPDTEPDEWVK

130          140          150          160          170          180  
NRKDESRAFHEDDEDADIDESEESAEESIAISIAQMEEKRLLHGLIHNVLPYVGTSVKTLV

190          200          210          220          230          240  
LAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDSWSWLGCCQSLRHLDLSGCEKI

250          260          270          280          290          300  
TDVALEKISRALKILTSHQSGFLKTSTSKitSTAwnKDITMQSTKQYACLHDLTNKGIG

310          320          330          340          350          360  
EEIDNEHPWTKPVSSENFTSPYVVMLDAEDLADIEDTVEWRHRNVESLCVMETASNFSCS

370          380          390          400          410          420  
TSGCFSKDIVGLRTSVCWQQHCASPAPFAYCGHSFCCTGTALRTMSSLPESSAMCRKAART

430          440          450          460          470          480  
RLPRGKDLYFGSEKSDQETGRVLLFLSLSGCYQITDHGLRVLTLGGGLPYLEHNLNSGC

490          500          510          520          530          540  
LTITGAGLQDLVSACPSLNDEYFYCDNINGPHADTASGCQNLQCGFRACCRSGE\*PLTS

550          560          570          580          590  
DLCLLHLAEQAFFHALYS\*HISCVNHPFLSVTCFGPIXYNFRNLNYQXIVML

FIG. 24A

10            20            30            40            50            60            70            80            90  
 ACAACACTGCTCTCAGAAGGATACTCCAGAACTCCTTAGAGGTCTTAGCCTATGGAATCATGCTGAAGAGCGACAGAACGAAARTTTTAAATTCTC  
 100          110          120          130          140          150          160          170          180  
 GTCGATGAAAAGTCAGATAAAAGAAGCAGAAGTGTCAAGAACACTCCACAGGTATAACCCATCTCCCTCTGAGGTAAATGCTGTCATTTCACT  
 190          200          210          220          230          240          250          260          270          280  
 ATCTTAATCCTCAAGAGTTATGTCGATGCAGTCAGTAAGCATGAAATGGTCTCAGCTGACAAAAACGGGATCGCTTGGAAACATCTTACCC  
 290          300          310          320          330          340          350          360          370  
 TGTTCATGGGCCAGGGTCACTGTTATGGTCCCGCAACTGAACTTGATACTGAACTGTGATGAATGGTGAAAATAGGAAAGATGAA  
 380          390          400          410          420          430          440          450          460          470  
 AGTCGTGCTTTCATGAGTGGATGAAGATGCTGACATTGATGAATCTGAAAGAGTCTGCGGAGGAATCAATTGCTATCAGCATTGACAAATGG  
 480          490          500          510          520          530          540          550          560  
 AAAAACGTTTACTCCATGGCTTAATTCAACGTTCTACCATATGTTGGTACTCTGTAAAACCTTAGTATTAGCATACAGCTCTGCAGTTTC  
 570          580          590          600          610          620          630          640          650  
 CACCAAAATGGTTAGGCAGATTAGAGCTTGTCTAACCTGGAGCATCTGGATCTTACCCAGACTGACATTCTGCAATTGACAGT  
 660          670          680          690          700          710          720          730          740          750  
 TGGCTTGGCTGGTGTGCCAGAGCTTCGGCATCTGATCTGCTGGTGTGAGAAAATCACAGATGTGGCCCTAGAGAAGATTCCAGAG  
 760          770          780          790          800          810          820          830          840  
 CTCTGGAAATTCTGACATCTCATCAAAGCTGCTTTGAAAACATCTACAAGCAAATTACTCAACTGCGTGAAAATAAGACATTACCAT  
 850          860          870          880          890          900          910          920          930          940  
 GCAGTCCACCAAGCAGTATGCCCTGGTGTGACGATTAACAAACAGGGATTGGAGAAGAAAATAGATAATGAAACACCCCTGGACTAACGCTGTT  
 950          960          970          980          990          1000          1010          1020          1030  
 TCTTCTGAGAATTTCACCTCCCTTATGTTGGATGTTAGATGCTGAAGATTGGCTGATATTGAAGATACTGTGGAATGGAGACATAGAAATG  
 1040          1050          1060          1070          1080          1090          1100          1110          1120  
 TTGAAAGTCTTGTAAATGAAACAGCATCCAATTAGTTGTTCCACCTCTGTTGTTAGTAAGGACATTGTGGACTAAGGACTAGTGT  
 1130          1140          1150          1160          1170          1180          1190          1200          1210          1220  
 CTGTTGGCAGCAGCATTGTGCTTCTCCAGCCTTCCAGTATTGTTGACTCATTTGTTGTCAGAGAACAGCTTAAAGAACTATGTCACTC  
 1230          1240          1250          1260          1270          1280          1290          1300          1310  
 CCAGAACTTCTGCAATGTGAGAAAAGCAGCAAGGACTAGATGCCCTAGGGAAAAGACTTAATTACTTGGGAGTGAACATCTGATCAAG  
 1320          1330          1340          1350          1360          1370          1380          1390          1400          1410  
 AGACTGGACGTGACTCTGTTCTCAGTTATGTTGATTCAGATCACAGACCAGGGCTCAGGGTTTGACTCTGGGAGGGCTGCC  
 1420          1430          1440          1450          1460          1470          1480          1490          1500  
 TTATTTGGAGCACCTTAACTCTCTGGTTGCTTACTATAACTGGTGTGAGGGCTCCAGGATTGGTTGACTCATGTCCTCTCTGAATGATGAA  
 1510          1520          1530          1540          1550          1560          1570          1580          1590  
 TACTTTACTACTGTGACAACATTAACGGCTCATGCTGATACCCGAGTGGATGCCAGATTGCACTGTTGTTGAGGCTCTGCGCT  
 1600          1610          1620          1630          1640          1650          1660          1670          1680          1690  
 CTGGCGAATGACCCCTGACTCTGATCTTGTCTACTTCAATTAGCTGAGCAGGCTTCTTCACTGCACTTACTCATAGCACATTCTTGTG  
 1700          1710          1720          1730          1740          1750          1760          1770  
 TAACCATCCCTTTGAGCGTGAATTGTTGGCCCATTNYTACAACCTCAAGAAATCTTAATTACCACTGTTGATGAAATGTTG

FIG. 24B

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10            20            30            40            50            60  
RVTS CG CL AR GS AM VFS NN DE GL IN KK LP KE LL RI FS FL DIV TL CR CA QI SK AW NI LA

70            80            90            100          110          120  
LD GS NW QR ID LF NF QID DV EG RV VEN I SK RC VG FL RK L SL RG C IGV GD SS L K TFA QN CR NI

130          140          150          160          170          180  
EH LN LN G CT K IT D S T C Y S L S R F C S K L K H L X L T C V S I T N S S L K G I S E G C R N L E Y L N L S W C

190          200          210          220          230          240  
DQ IT K D G I E A L V R G C R G L K A L L R G C T Q L E D E A L K H I Q N Y C H E L V S L N L Q S C S R I T D E G V

250          260          270          280          290          300  
VQ IC RG CH RL Q AL CL SG CS NL TD AS LT AL GL NC PRL Q I L E A A R C S H L T D A G F T L L A R N C H

310          320          330          340          350          360  
E L E K M D L E X C I L I T D S T L I Q L S I H C P K L Q A L S L S H C E L I X D D G I L H L S N S T C G H E R L R V L

370          380          390          400          410          420  
E L D N C L L I T D V A L X H L E N C R G L E R L E L Y D C Q Q V T R A G I K R M R A Q L P H V K V H A Y F A P V T P P

430          440          450          460          470          480  
T A V A G S G Q R L C R C C V I L \* Q Q L P G P K G \* \* G I L S S R R P E S S \* P T P P S P N L L I L H W E R H L Q F P

490          500          510          520          530          540  
N R H L S R F K N G E D K K G F I S N I \* H H I V T \* N M A L T \* L V L L L P S S L M S S L T S T H L L L \* Y L \* R L I

550  
I L K T D Q T G P A S K Y I N C V Q \*

FIG. 25A

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10 20 30 40 50 60 70 80 90  
TTTTACTGTACACAGTTGATGTATTTGATGCTGGGCCGTCTGGTCTGCTTGAGGATTATTAACCTTTAGAGGTATCAGAGAACCAATGGG  
100 110 120 130 140 150 160 170 180  
TACTGGTAGGGCTGCTCATTAGGGAAAGAGGGCAAAGGAGGACTAGCTAGGTCAAGGCCATGTTCAAGGTACAACTGTGATGTCAGATGTTGCT  
190 200 210 220 230 240 250 260 270 280  
TATAAACTTCTTCTTGTCTTCGCCATTCTTAAATCTGATAGGTGCCCTGTTGGAAACTGTAAATGCCCTTCCCAATGGAGAATCAACAGATTG  
290 300 310 320 330 340 350 360 370  
.GGTGATGGTAGGGCTAGGAAAGACTCAGGTCTCTAGAGGAAGGATGCCCTCATCACCCCTTNGGCCAGGCAGCTGCTGTCAGAGAATGAGAATGAGA  
380 390 400 410 420 430 440 450 460 470  
CACAGCACCTGCACAGTCGCTGTCCACTTCCCTGCCACTGCTGCGGTGGGGTGACGGGAGCAAAGTAGGGCTGGACTTACAGATGAGGGAGCTG  
480 490 500 510 520 530 540 550 560  
AGCCCCATCCGTTGATGCCCTGCACGGGTAACCTGCTGGCAGTCAGCTCGAGGCCCTCGGCAGTTCTCTAGGTGTYCCAGG  
570 580 590 600 610 620 630 640 650  
GCCACATCAGTGTAGGAGGGAGTTGTCACACTCCAGTACCCGAGCCCTCATGCCACAGCTACTGTTGTCAGGTGCAGGATCCCACATCAT  
660 670 680 690 700 710 720 730 740 750  
CTGKGATGAGTTCACAGTGGGACAGGGCTCAGGGCTTCCAGTTAGGACAGTGAATGGAGAGCTGGATGACTGTCGCTGCGTTATCAGGATGCA  
760 770 780 790 800 810 820 830 840  
WTCCTCAAGATCCATCTCTCCAATTCTGGCAATTCCGAGCTAAAAGTGTAAAACCTGGCTCAGTCATAATGGGAGCATGGGCAGCCCTCCAAA  
850 860 870 880 890 900 910 920 930 940  
ATTTGCAAGTCGGGACAGTTCAAAACCCAGGGCTTAAGAGAGGCATCTGTGAGGTGCTGCAACCCGAAAGGCAGAGGCCTGAGCCGGTGAC  
950 960 970 980 990 1000 1010 1020 1030  
AGCCCCCTGCATATCTGCACCACACCTTCATCCGTGATACGTGAGCAGGACTGCAAGTTGAGGCTCACAGCTCATGGCACTGCAATTCTGAATGTC  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
TTTCAGAGCTTCATCTCTAATCTGTGTCAGGCCCTCAGGACCAGGGCTTCAGGCCCTGACAAACCTCGCACCAGTGCCTCGATGCCATCCTTC  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
GTGATCTGATCACACCAAGAGAGGTTCAAGGTACTCCAGGTTTCCGGCAGGCCCTCACTGATCCCTTCAAGGGCTGTTGTAATAGACACACAGG  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
AGGTCAAGAWCCACATGTTTCAGCTTGGAACAGAATCTGCTAAGGTATAACACGTGTCAGTGTGATTTTGTCATCCATTGAGGTTCAAAATG  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
TTCAATGTTTCGGCAGTTCTGTGCAAAAGTCCTCAAGGAGGAATCCCCAACCCAATGCAAGCCTGCCAAGCTGAGCTTCCTCAGGAATCCAACG  
1420 1430 1440 1450 1460 1470 1480 1490 1500  
CATGCCCTCGAGATATTTCACCACTGACGCCCTACATCTATTGAAAGTAAAGATCTATTCTTGTGCCAGTGTGCTTCCATCCAGGGCTA  
1510 1520 1530 1540 1550 1560 1570 1580 1590  
AGATGTTCAAGCCTGGAAATCTGTGACATCGGCACAAAGTTACTATATCCAAGAAGGAAAATATTCTAACAGAAGTTCTTGGGTAACCTT  
1600 1610 1620 1630 1640 1650 1660 1670 1680  
TTTCTTAATAAGGCCCTCATCATTGTTGAGAAAACCATGGCCGAAGAGCCGGAGCCGAGGCCACAGCCCCAAGTCACACGGC

FIG. 25B

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10            20            30            40            50            60  
MSPVFPMLTVLTMFYIICLRRARTATRGEMMNTHRAIESNSQTSPNNAEVVQYAKEVVD

70            80            90            100          110          120  
FSSHYGSENSMSYTMWNLAGVPNVFPSSGDFTQTAVFRYGTWWDQCPSASLPFKRTPPN

130          140          150          160          170          180  
FQSQDYVELTFFEQQQVYPTAVHVLETYHPGAVIRILACSANPYSPNPPAEVRWEILWSERP

190          200          210          220          230          240  
TKVNASQARQFKPCIKQINFPTNLIRLEVNSSLLEYYTTELDAVVLHGVKDKPVLSLKTSL

250          260          270          280          290          300  
IDMNDIEDDAYAEKDGCMDSLNKKFSSAVLGEGPNNGYFDKL PYELIQLILNHLTLPDL

310          320          330          340          350          360  
CRLAQTCKLLSQHCCDPLQYIHLNLQPYWAKLDDTSLEFLQSRCTLVQWLNL SWTGNRGF

370          380          390          400          410          420  
ISVAGFSRFLKVCGSELVRLELSCSHFLNETCLEVISEMCPNLQALNLSSCDKLPPQAFN

430          440          450          460          470          480  
HIAKLCSLKRLVLYRTKVEQTALLSILNFCELOHLSLGSCVMIEDYDVIAISMIGAKCKK

490          500          510          520          530          540  
LRTLSDLWRCKNITENGIAELASGCPILLEELDLGWCPTLQSSTGCFTRLAHQLPNLQKLFL

550          560          570          580          590          600  
TANRSVCDTDIDEALACNCTRLQQLDILGTRMVSPASLRKLLESCKDLSLLDVSFC SQIDN

610          620  
RAVLELNASFPKVFIIKKSFTQ

FIG. 26A

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10 20 30 40 50 60 70 80 90  
ATGTCACCGGTCTTCCCATGTTAACAGTCTGACCATGTTTATTATATGCCTTCGGCGCCGAGGCCAGGACAGCTACAAGAGGAGAAATGA  
100 110 120 130 140 150 160 170 180  
TGAACACCCATAGAGCTATAAGAACAAACAGGCCAGACTCCCTCTCAATGCAGAGGTAGTCAGTATGCCAAGAAAGTAGTGATTCAGTT  
190 200 210 220 230 240 250 260 270 280  
CCATTATGGAAGTGAGAATAGTATGCTCTATACTATGTTGGAAATTGGCTGGTACCAAAATGATTCCTCAGTTCTGGTACCTTACTCAGACA  
290 300 310 320 330 340 350 360 370  
GCTGTGTTTCGAACCTTATGGGACATGGTGGGATCAGTGTCTAGTGCTTCCCTGCCATTCAAGAGGACGCCACCTAATTTCAGAGGCCAGGACT  
380 390 400 410 420 430 440 450 460 470  
ATGTGGAACCTACTTTGAACACAGGTGTACAGCTGTACATGTTCTAGAAAACCTATCATCCGGACAGTCATTAGAAATTCTCGCTTG  
480 490 500 510 520 530 540 550 560  
TTCTGCAAATCCTTATTCCCCAAATCCACCAAGCTGAAGTAAGATGGGAGATTCTTGGTCAGAGAGACCTACGAAGGTGAATGCTTCCAAAGCT  
570 580 590 600 610 620 630 640 650  
CGCCAGTTAACCTTGTATTAAACGATAAAATTCCCCACAATCTTACAGACTGGAAGTAAATAGTTCTCTCTGGAAATTACACTGAAT  
660 670 680 690 700 710 720 730 740 750  
TAGATGCAGTTGTGCTACATGGTGTGAAGGACAAGCCAGTGTCTCTCAAGACTTCACTTATTGACATGAATGATAGAAAGATGATGCCCTA  
760 770 780 790 800 810 820 830 840  
TGCAGAAAAGGATGGTGTGGAATGGACAGTCTAACAAAAAGTTACCGAGTGTCTCCGGGAAGGCCAAATAATGGTATTTGATAAAA  
850 860 870 880 890 900 910 920 930 940  
CTACCTTATGAGCTTATTCAGCTGATTCTGAATCATCTTACACTACCAAGACCTGTGTAGATTAGCACAGACTTGCAAACACTGAGCCAGCATT  
950 960 970 980 990 1000 1010 1020 1030  
GCTGTGATCCTCTGCAATACATCCACCTCAATGCCAACCATACTGGCAAAACTAGATGACACTTCTCTGGAAATTCTACAGTCTCGCTGCC  
1040 1050 1060 1070 1080 1090 1100 1110 1120  
TCTTGTCCAGTGGCTTAATTCTTGGACTGCCAATAGAGGCTCATCTGTGTGAGGATTAGCAGGTTCTGAAGGTTGTGGATCCGAA  
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220  
TTAGTACGCCCTTGATGTTGCTGCAGCCACTTCTTAATGAAACTTGCTTAGAAGTTATTCTGAGATGTGCTCAAATCTACAGGCCCTAAATC  
1230 1240 1250 1260 1270 1280 1290 1300 1310  
TCTCCCTCTGTGATAAGCTACCAACCTCAAGCTTCAACCACATTGCCAAGTTATGCGCCCTAAACGACTTGTCTATGCCAACAAAAGTGA  
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410  
GCAAACAGCACTGCTCAGCATTTGAACCTCTGTCAGAGCTCAGCCACCTCAGTTAGGCAGTTGTGTATGATTGAAGACTATGATGTGATA  
1420 1430 1440 1450 1460 1470 1480 1490 1500  
GCTAGCATGATAGGAGGCCAAGTGTAAAAAAACTCCGGACCCCTGGATCTGTGGAGATGTAAGAATATTACTGAGAATGGAATAGCAGACTGGCTT  
1510 1520 1530 1540 1550 1560 1570 1580 1590  
CTGGGTGTOCACTACTGGAGGAGCTTGACCTTGGCTGGTGCCCAACTCTGCAGAGCAGCAGCACCAGGTGCTTACCCAGACTGGCACACCCAGCTCCC  
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690  
AAACTTGCAAAACTCTTCTTACAGCTAATAGATCTGTGTGACAGACAGACATTGATGATTGGCATGTAATTGTACCGGTTACAGCAGCTG  
1700 1710 1720 1730 1740 1750 1760 1770 1780  
GACATATTAGGAACAAGAATGGTAAGTCCGCATCTTAAGAAAACCTCTGGAATCTGTAAAGATCTTACTTGATGTTGCTCTGTT  
1790 1800 1810 1820 1830 1840 1850 1860  
CGCAGATTGATAACAGAGCTGTGCTAGAACTGAATGCAAGCTTCCAAAAGTGTGTCATAAAAAAGAGCTTACTCAGTGA

FIG. 26B

10            20            30            40            50            60  
MQLVPDIEFKITYTRSPDGDGVGNSYIEDNDDDSKMA DLLSYFQQQLTFQESVLKLCQPE

70            80            90            100          110          120  
LESSQIHISVLPMEVLMYIFRWVVSSDLRLRSLEQLSLVCRGFYICARDPEIWRLACLV

130          140          150          160          170          180  
WGRSCIKLVPYTSWREMFLERPRVRFDGVYISKTTYIRQGEQSLDGFYRAWHQVEYYRYI

190          200          210          220          230          240  
RFFPDGHVMMLTTPEEPQSIVPRLRTRNRTDAILLGHYRLSQTDNQTKVFAVITKKKE

250          260          270          280          290          300  
EKPLDYKYRYFRRVPVQEADQSFHVGLQLCSSGHQRFNKLIWIHHSCHITYKSTGETAVS

310          320  
AFEIDKMYTPLFFARVRSYTA FSERPL

FIG. 27A

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10            20            30            40            50            60  
ATGCAACTTGTACCTGATATAGAGTTCAAGATTACTTACCCGGTCTCCAGATGGTGATGGCGTTGGA  
70            80            90            100          110          120          130  
AACAGCTACATTGAAGATAATGATGATGACAGCAAAATGGCAGATCTCTTGTCTACTTCCAGCAGCAA  
140            150          160          170          180          190          200  
CTCACATTCAGGAGTCTGTGCTAACTGTGTAGCAGCTGAGCTTGAGAGCAGTCAGATTACATATCA  
210            220          230          240          250          260          270  
GTGCTGCCATGGAGGTCTGATGTACATCTTCGATGGGTGGTGTCTAGTGACTTGGACCTCAGATCA  
280            290          300          310          320          330          340  
TTGGAGCAGTTGTCGCTGGTGTGCAGAGGATTCTACATCTGTGCCAGAGACCCTGAAATATGGCGTCTG  
350            360          370          380          390          400          410  
GCCTGCTTGAAGTTGGGCAGAAGCTGTATTAACCTGTCCGTACACGTCCTGGAGAGAGATGTTT  
420            430          440          450          460          470          480  
TTAGAACGGCCTCGTGTGGTTGATGGCGTGATATCAGTAAAACACATATTCGTCAAGGGGAA  
490            500          510          520          530          540          550  
.CAGTCTCTTGATGGTTCTATAGAGCCTGGCACCAAGTGGAAATTACAGGTACATAAGATTCTTCCT  
560            570          580          590          600          610          620  
GATGGCCATGTGATGATGTTGACAACCCCTGAAGAGCCTCAGTCCATTGTTCCACGTTAAGAACTAGG  
630            640          650          660          670          680          690  
AATACCAGGACTGATGCAATTCTACTGGGTCACTATCGCTTGTACAAGACACAGACAATCAGACCAAA  
700            710          720          730          740          750  
GTATTTGCTGTAATAACTAAGAAAAAGAAGAAAAACCACTTGACTATAAAACAGATATTCGTCGT  
760            770          780          790          800          810          820  
GTCCCTGTACAAGAACGAGATCAGAGTTTCATGTGGGCTACAGCTATGTTCCAGTGGTCACCAGAGG  
830            840          850          860          870          880          890  
TTCAACAAACTCATCTGGATACATCATTCTGTACATTACAAATCAACTGGTGAGACTGCAGTC  
900            910          920          930          940          950          960  
AGTGCTTTGAGATTGACAAGATGTACACCCCTTGTCTCGCCAGAGTAAGGAGCTACACAGCTTC  
970            980  
TCAGAAAGGCCTCTGTAG

FIG. 27B

10            20            30            40            50            60  
AALDPDLENDFFVRKTGAFHANPYVLRAFEDFRKFSEQDDSVERDIILQCREGELVLPD

70            80            90            100          110          120  
LEKDDMIVRRIPAQKKEVPLSGAPDRYHPVVFPEPWTLPPPEIQAKFLCVLERTCPSKEKS

130          140          150          160          170          180  
NSCRILVPSYRQKKDDMLTRKIQSWKLGTTVPPISFTPGPCSEADLKRWEAIREASRLRH

190          200          210          220          230          240  
KKRLMVERLFQKIYGENGSKMSDVSAEDVQNLRQLRYEEMQKIKSQLKEQDQKWQDDLA

250  
KWKDRRKSYTSDLQK

FIG. 28A

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10            20            30            40            50            60  
GCAGCCCTGGATCCTGACTTAGAGAATGATGATTCTTGTCAAGAAAGACTGGGCTTCATGCAAAT

70            80            90            100          110          120          130  
CCATATGTTCTCCGAGCTTTGAAGACTTAGAAAGTTCTGAGCAAGATGATTCTGTAGAGCGAGAT

140          150          160          170          180          190          200  
ATAATTTACAGTGTAGAGAAGGTGAACCTGTACTTCCGGATTTGGAAAAAGATGATATGATTGTTCGC

210          220          230          240          250          260          270  
CGAATCCCAGCACAGAAGAAAGAAGTGCCGCTGTCTGGGGCCCCAGATAGATACCACCCAGTCCCTTT

280          290          300          310          320          330          340  
CCCGAACCTGGACTCTCCTCCAGAAATTCAAGCAAAATTCTCTGTACTTGAAAGGACATGCCA

350          360          370          380          390          400          410  
TCCAAAGAAAAAGTAATAGCTGTAGAATATTAGTTCCATATCGGCAGAAGAAAGATGACATGCTG

420          430          440          450          460          470          480  
ACACGTAAGATTCACTGGAAACTGGGAACCTACCGTGCCTCCATCAGTTCACNCCTGGCCCTGC

490          500          510          520          530          540          550  
AGTGAGGCTGACTTGAAGAGATGGGAGGCCATCCGGGAGGCCAGCAGACTCAGGACAAGAAAAGGCTG

560          570          580          590          600          610          620  
ATGGTGGAGAGACTCTTCAAAAGATTATGGTGAGAATGGGAGTAAGTCCATGAGTGTAGCGCA

630          640          650          660          670          680          690  
GAAGATGTTCAAAACTTGCGTCAGCTGCGTTACGAGGAATGCAGAAAATAAAATCACATTAAAAGAA

700          710          720          730          740          750  
CAAGATCAGAAATGGCAGGATGACCTTGCAAAATGGAAAGATCGTCGAAAAAGTTACACTCAGATCTG

760  
CAGAAG

FIG. 28B

5914-090

(SHEET 55 OF 80)

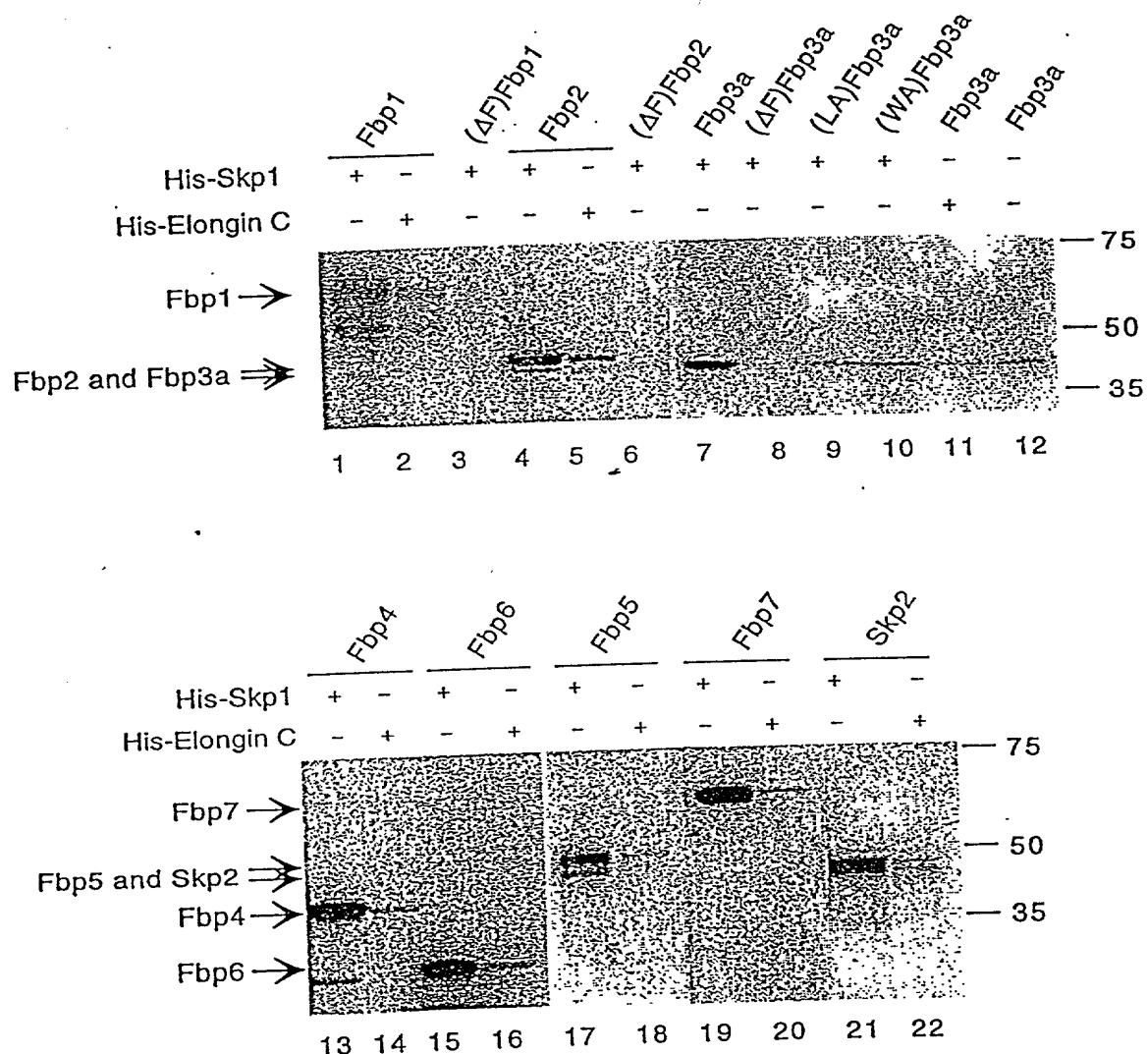


FIG. 29

5914-090

(SHEET 56 OF 80)

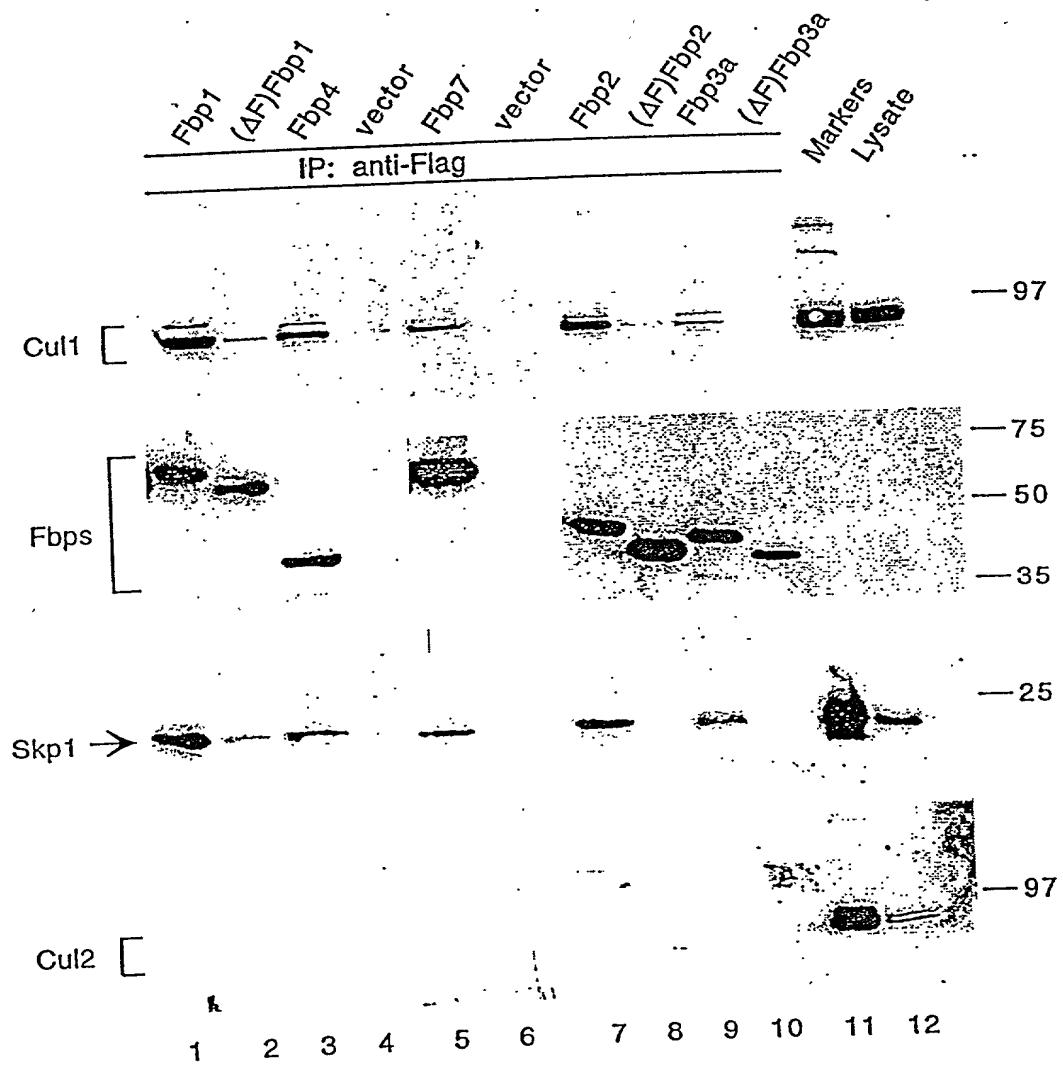


FIG. 30

5914-060

(SHEET 57 OF 80)

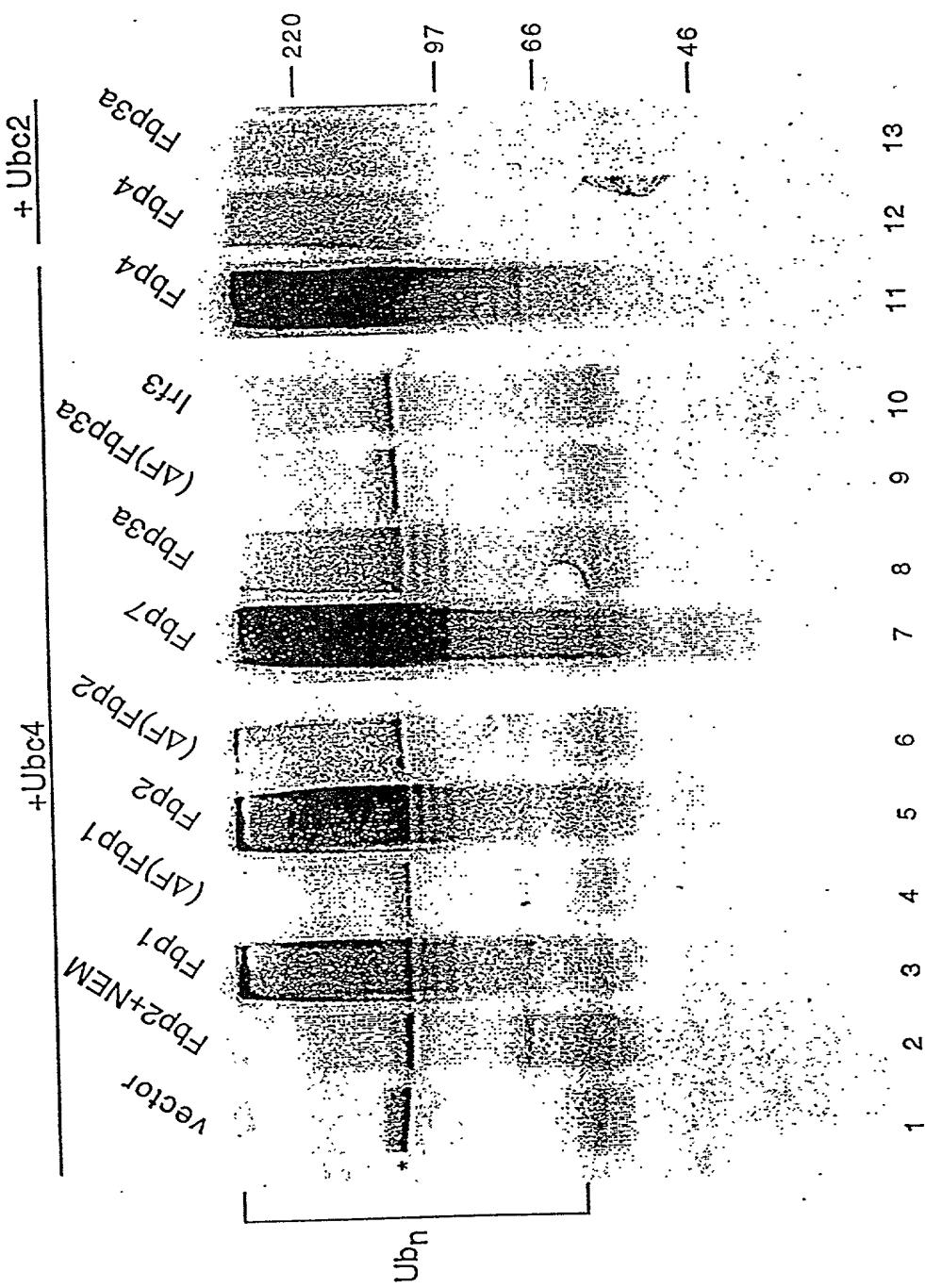


FIG. 31

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(SHEET 58 OF 80)

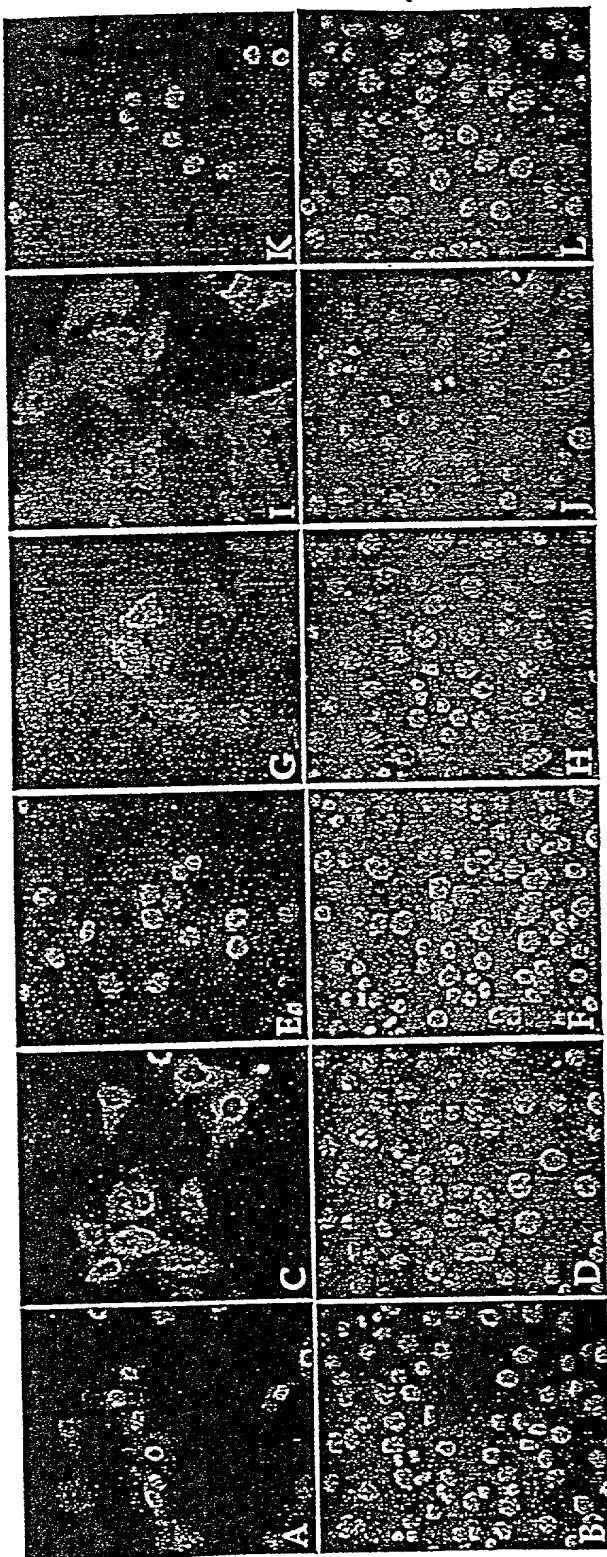


FIG. 32

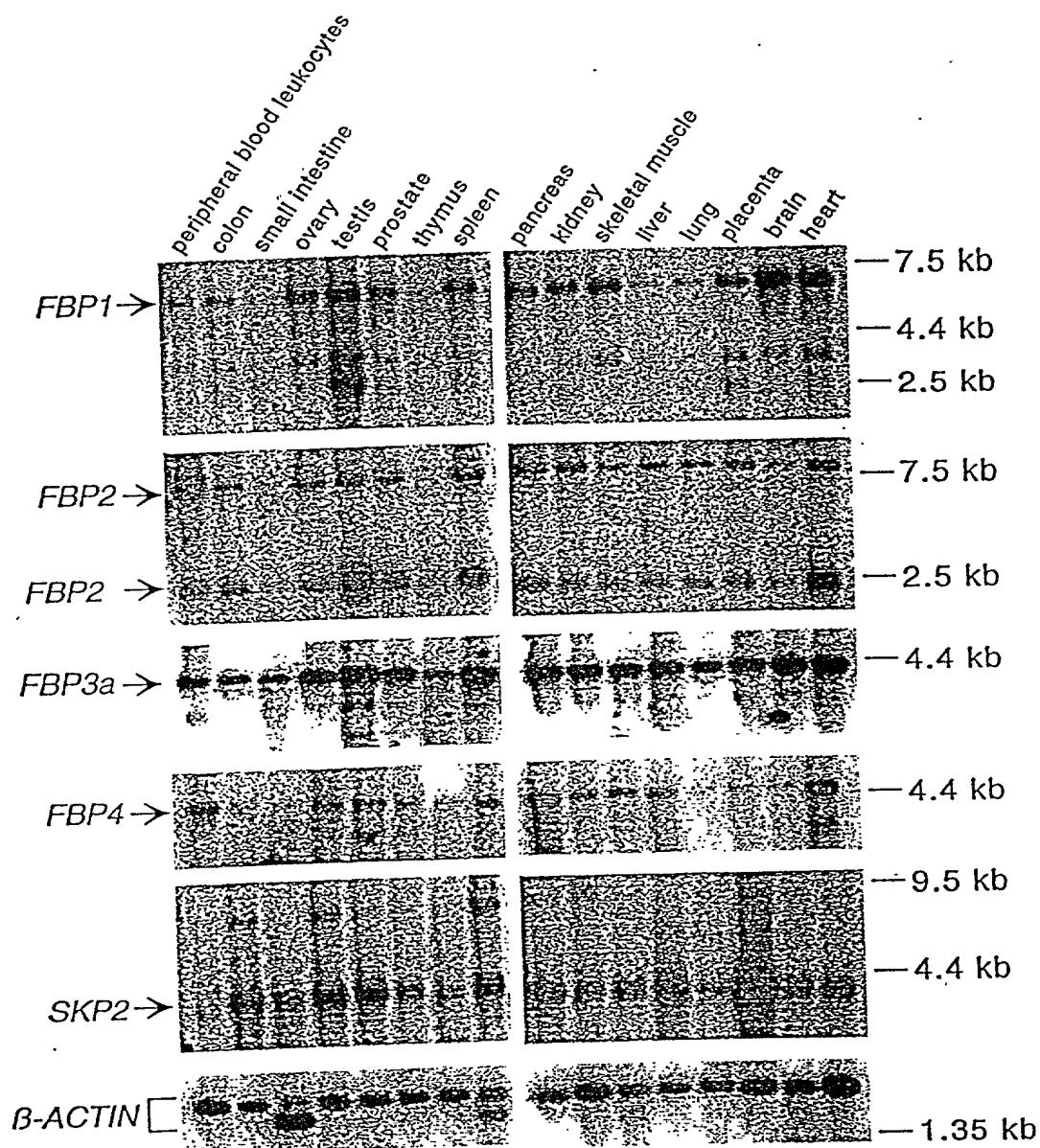


FIG. 33

5914-000

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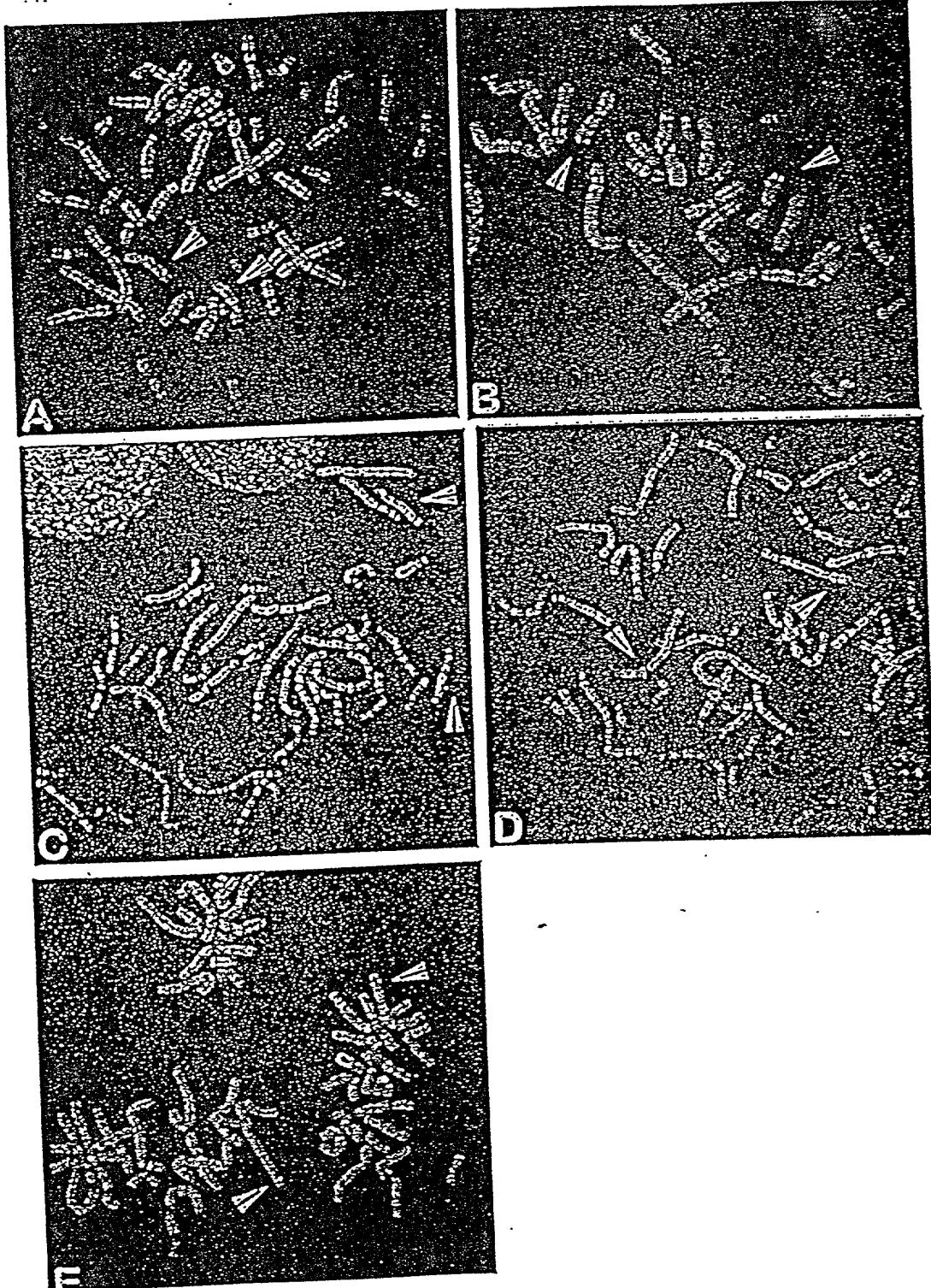


FIG. 34 A-E

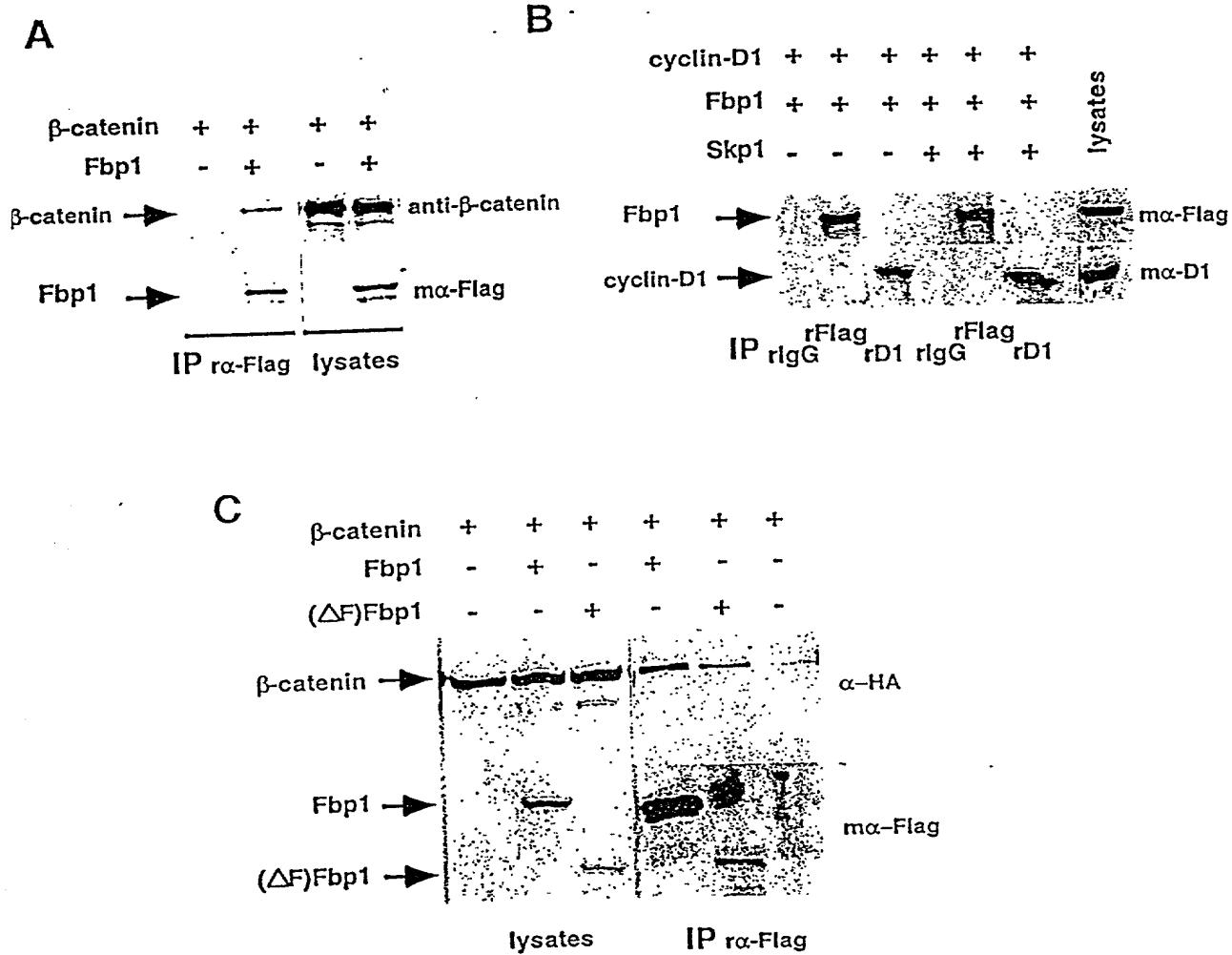
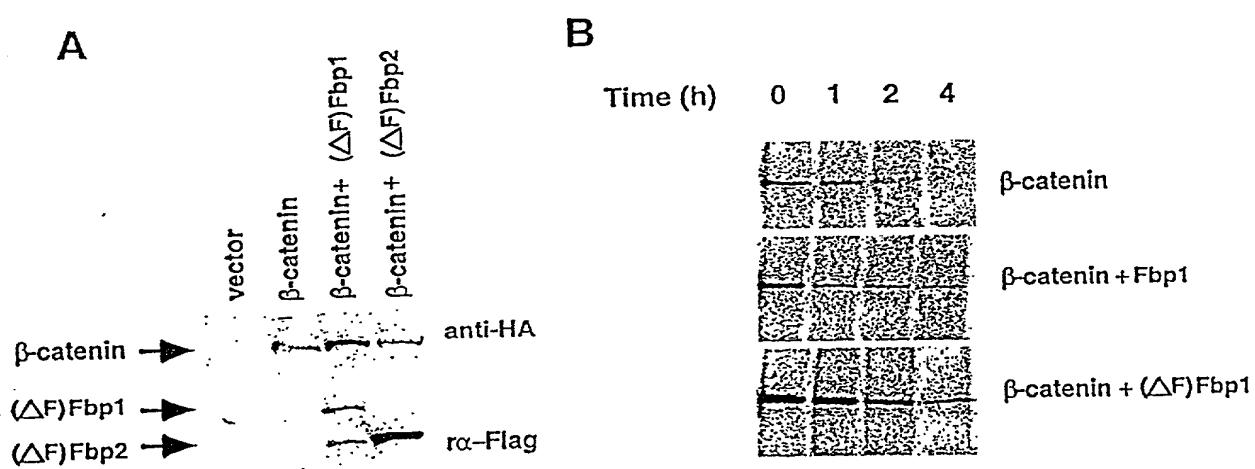


FIG. 35 A-C

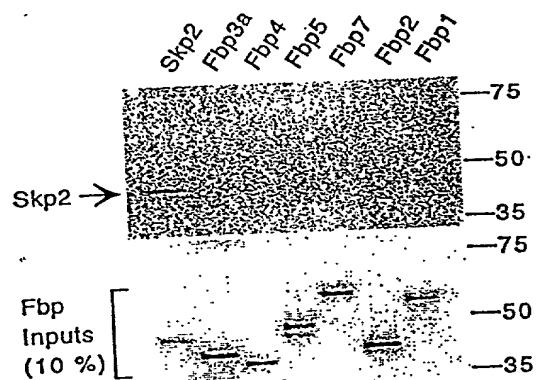


**FIG. 36 A-B**

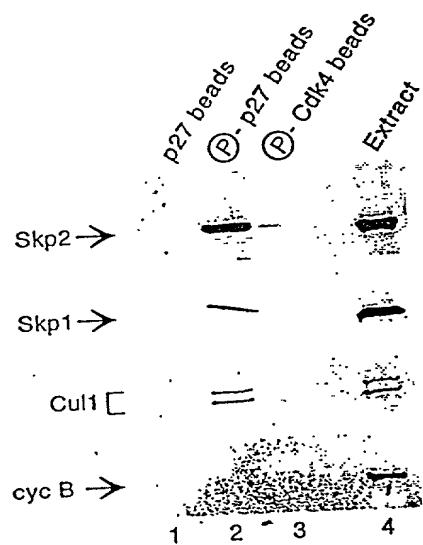
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(SHEET 63 OF 80)

A



B



C

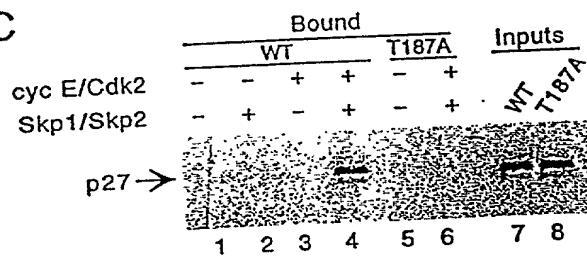


FIG. 37 A-C

5914-09D

(SHEET 64 OF 80)

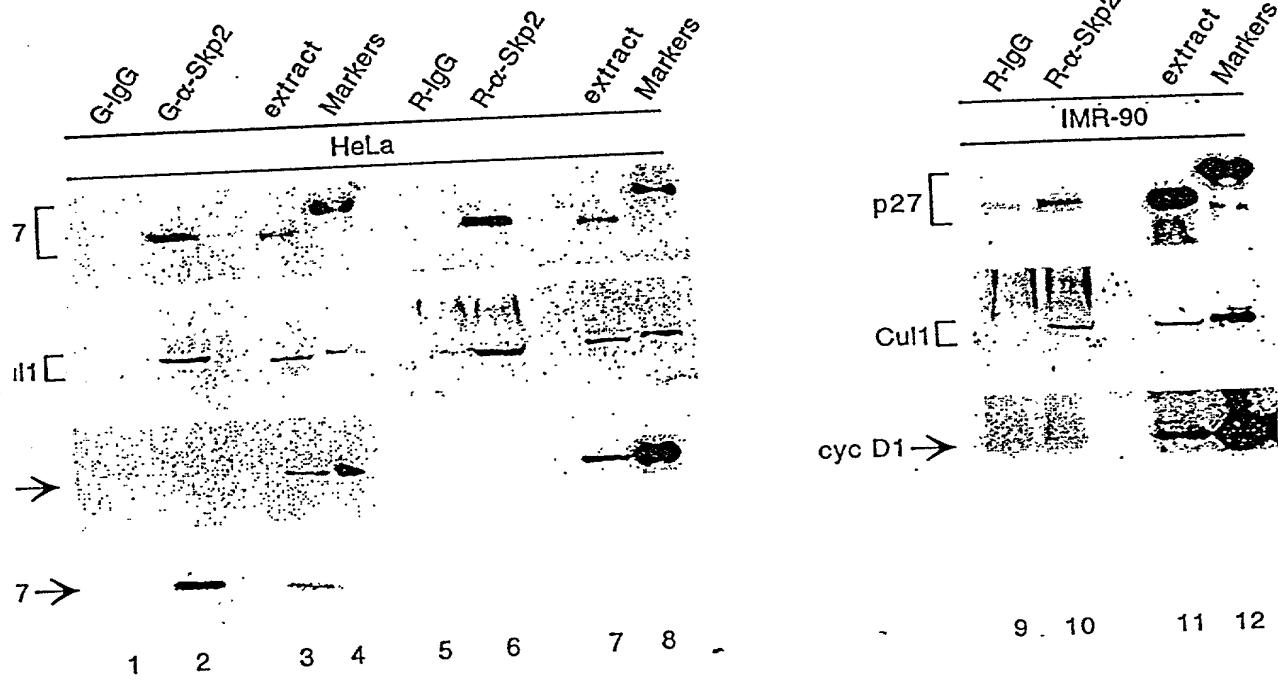
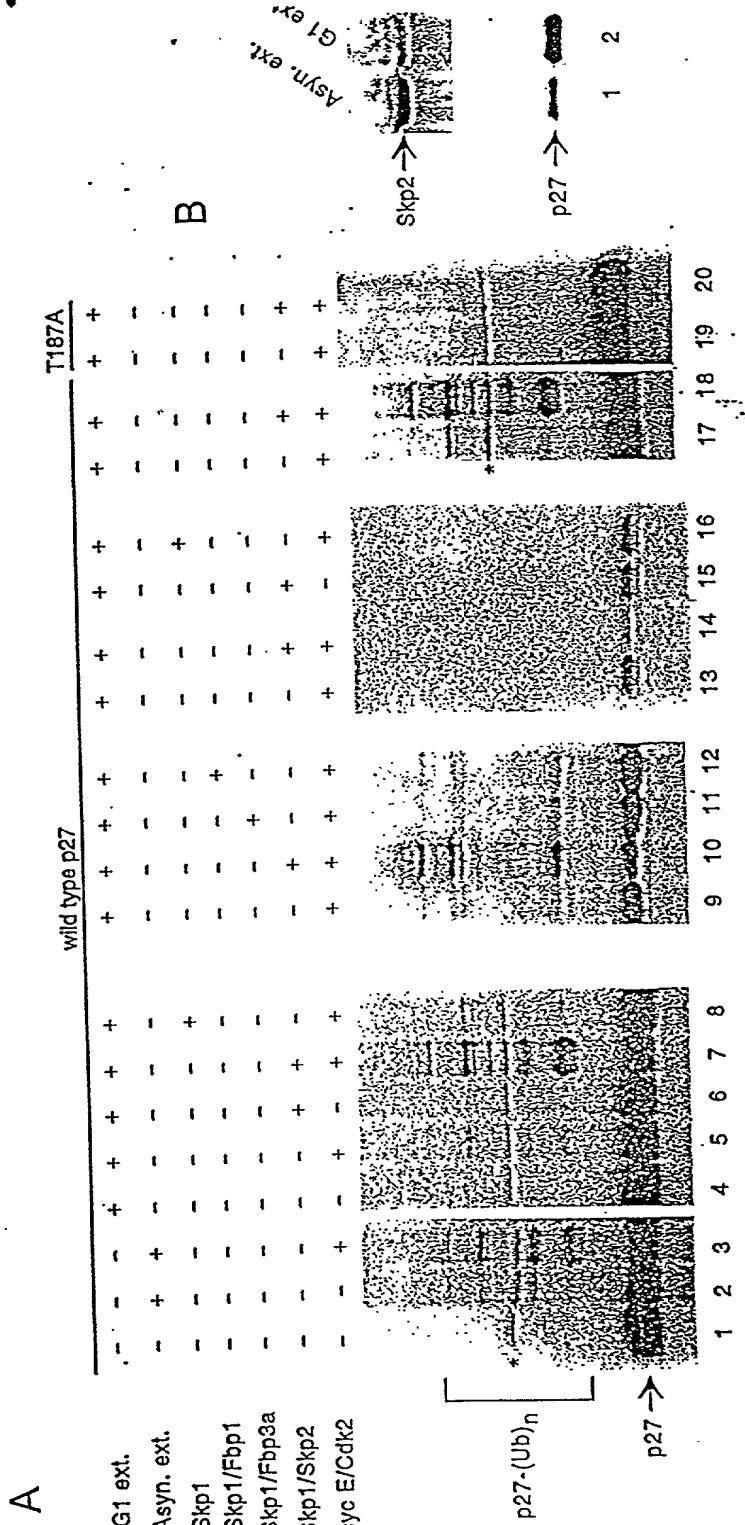


FIG. 38

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**FIG. 39 A-B**

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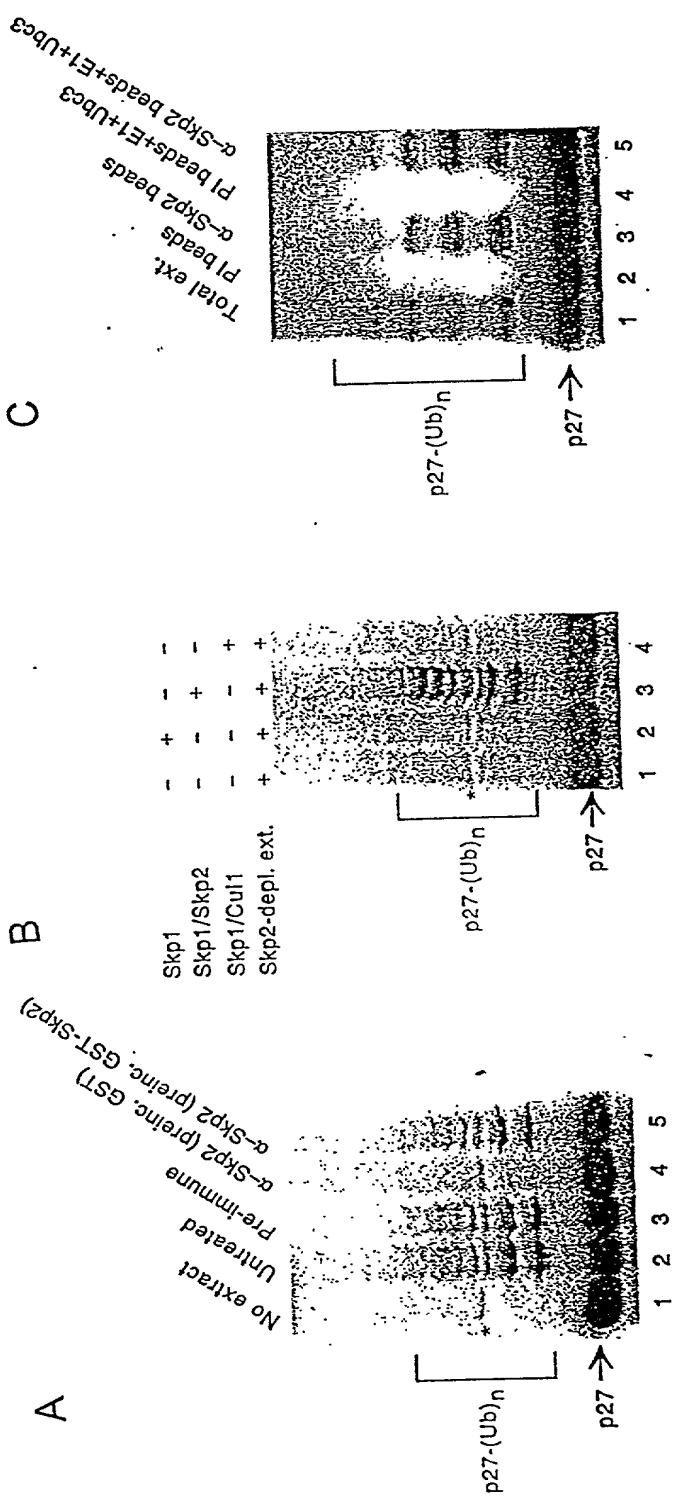
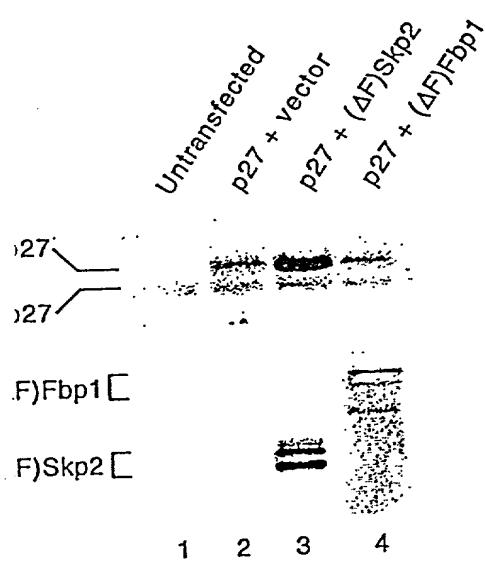


FIG. 40 A-C

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B

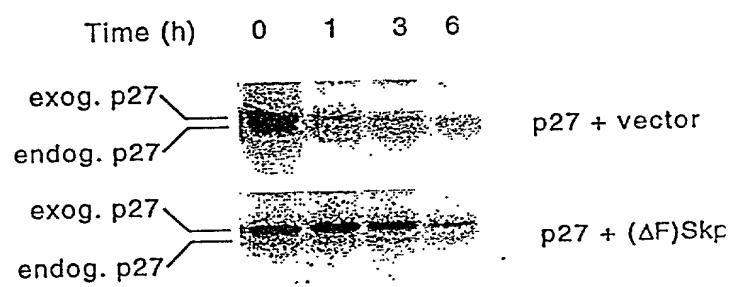


FIG. 41 A-B

5914-090

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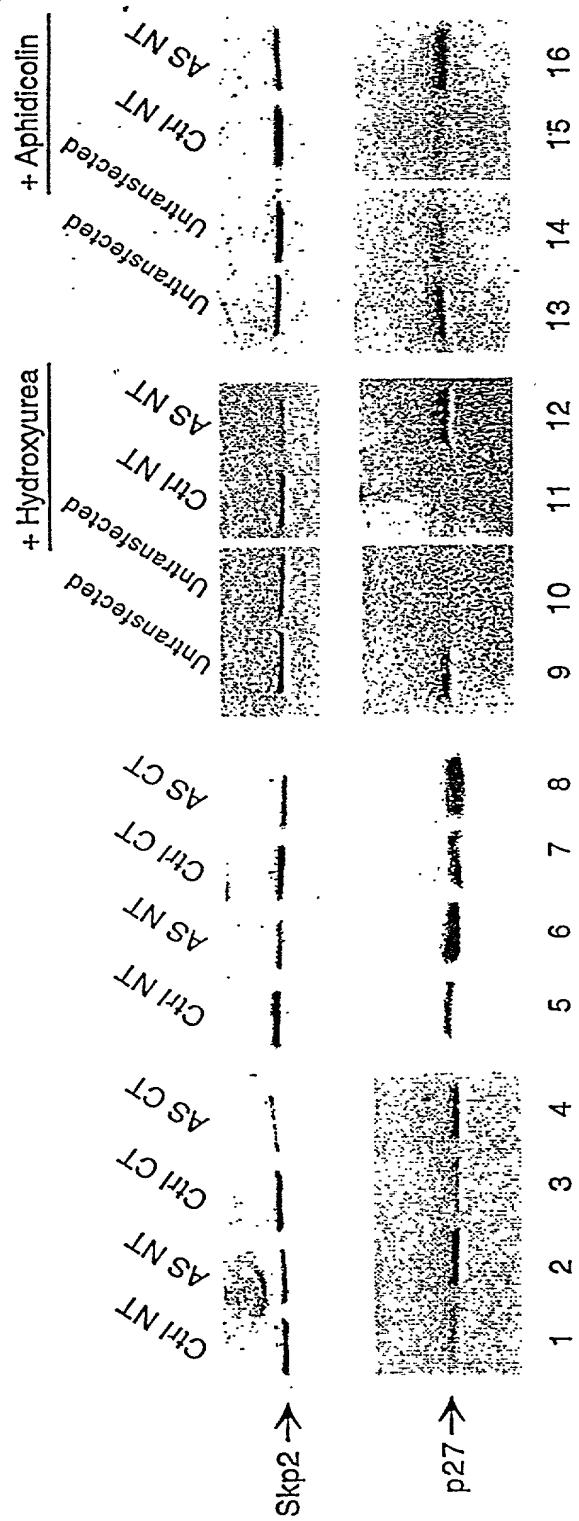
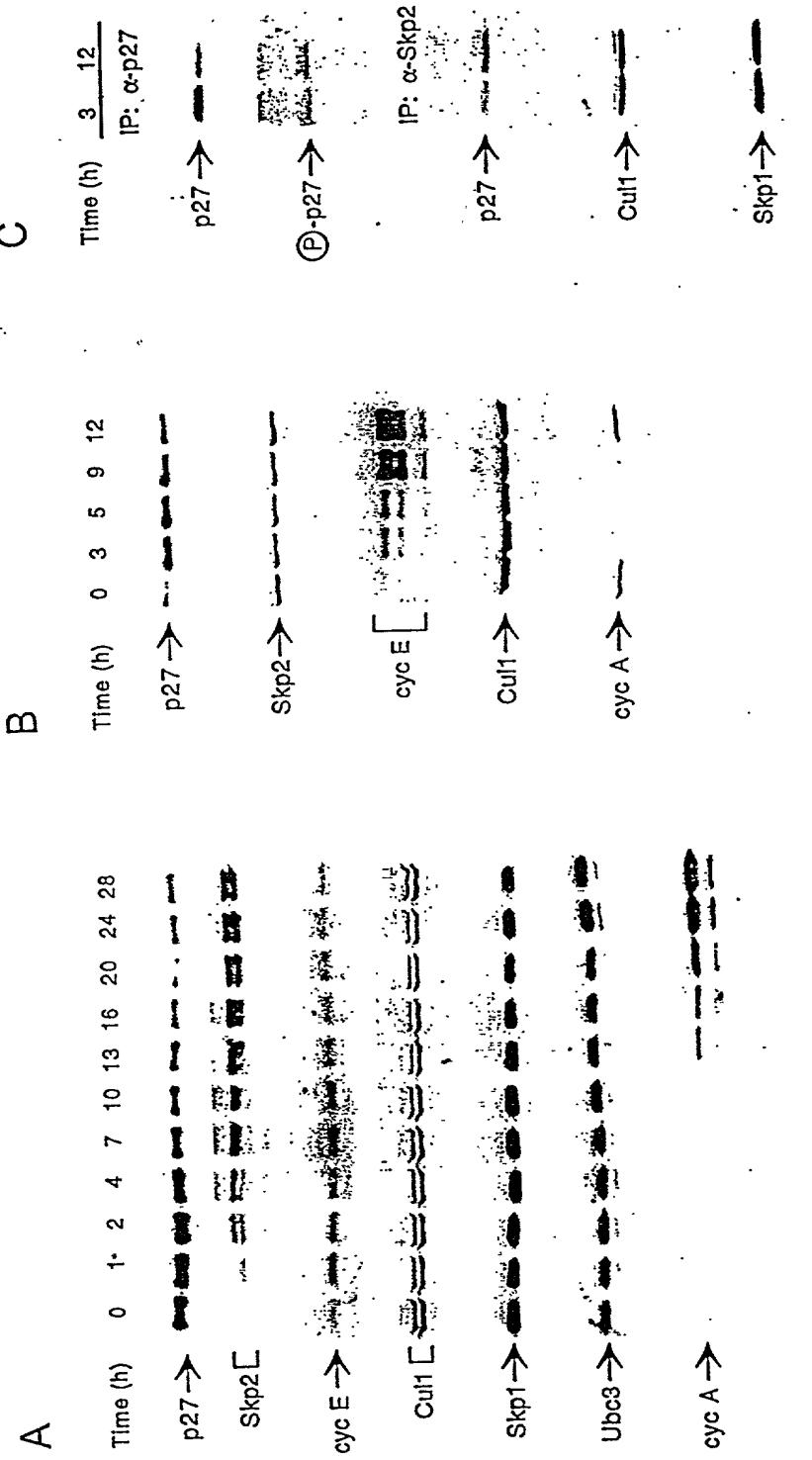


FIG. 42

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**FIG. 43 A-C**

5914-090

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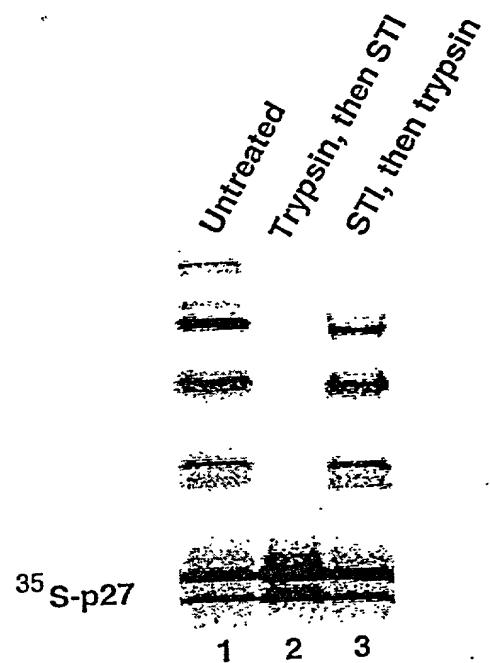


FIG. 44

5914-090

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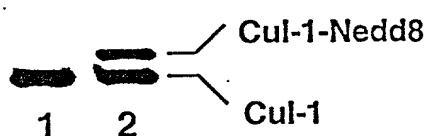
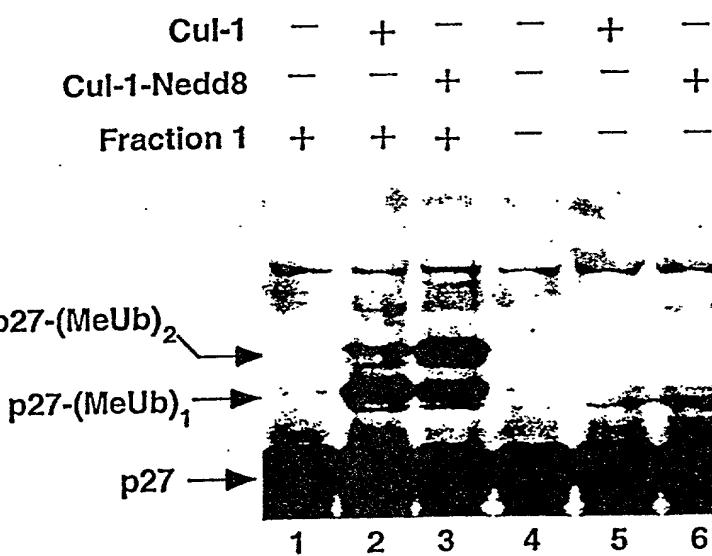
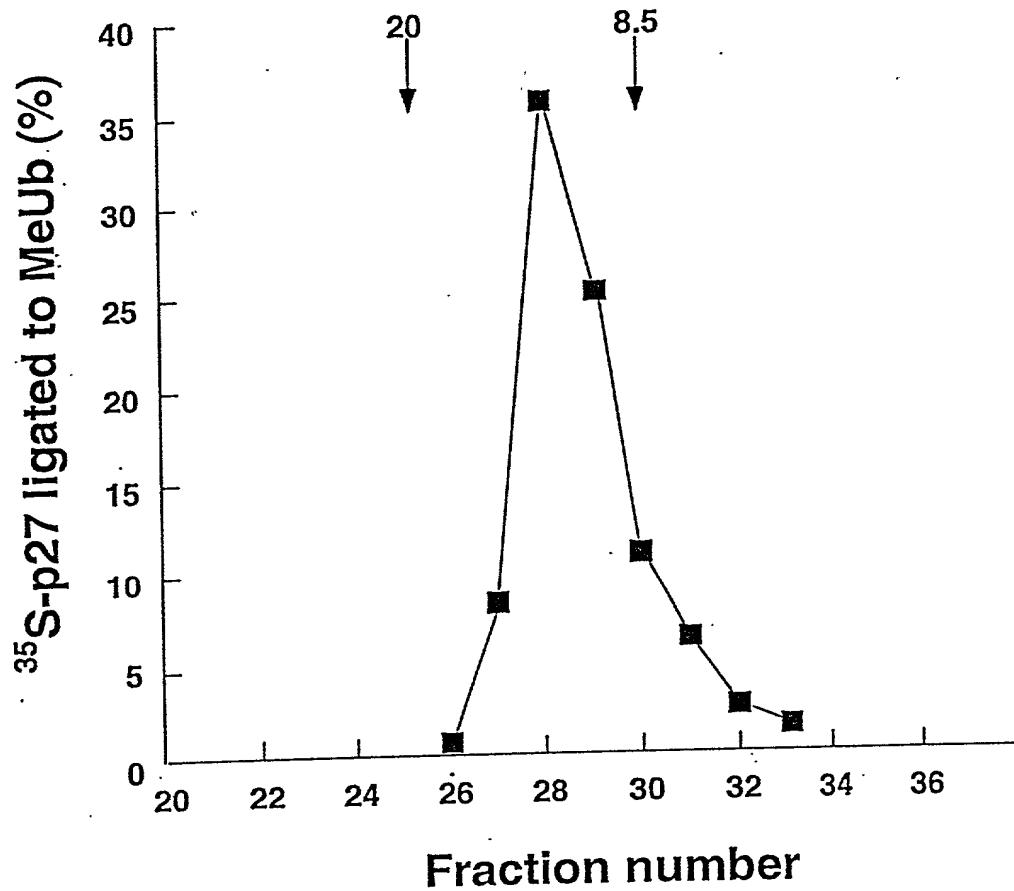
**A****B****C**

FIG. 45

914-090

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A.



B.

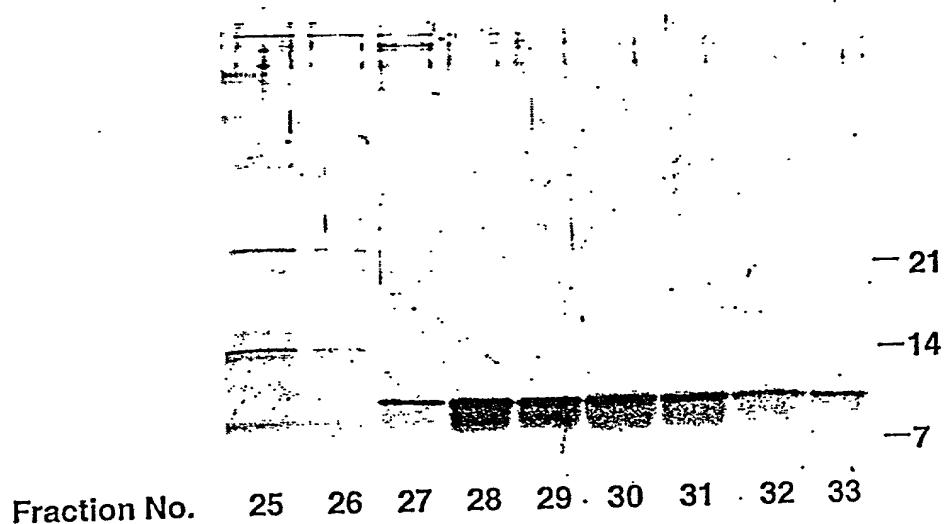


FIG. 46

114-090

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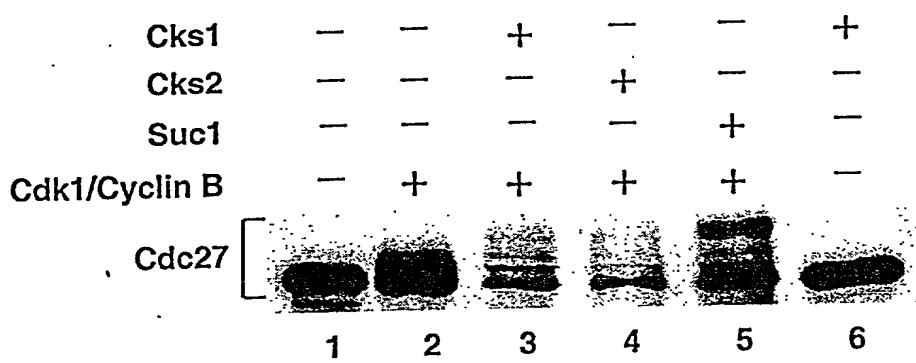


FIG. 47

914-090

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A

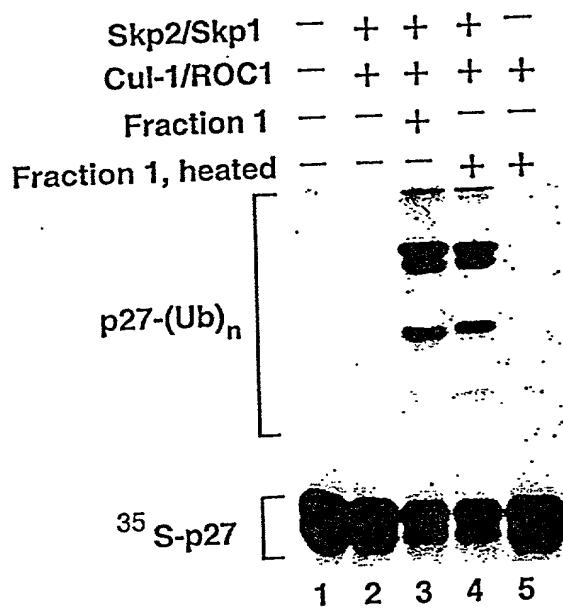


FIG. 48

5914-090

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B

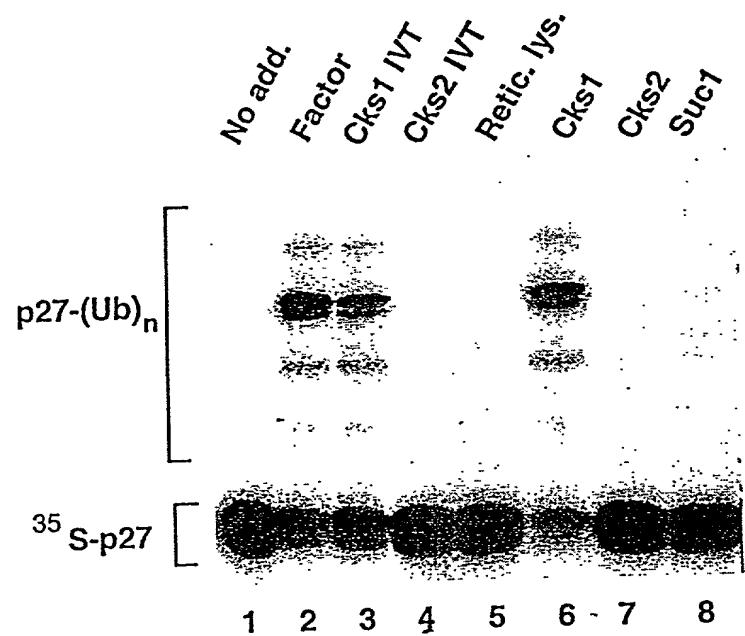
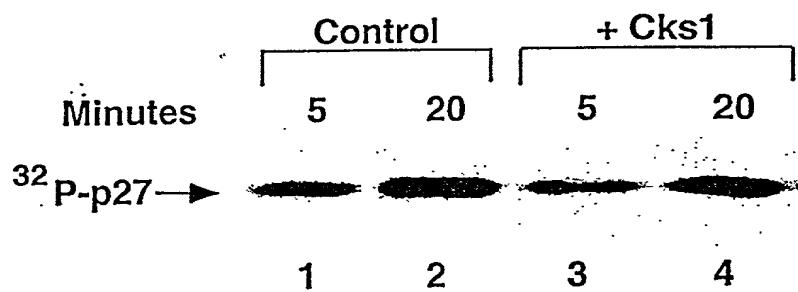


FIG. 48

5914-090

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A



B

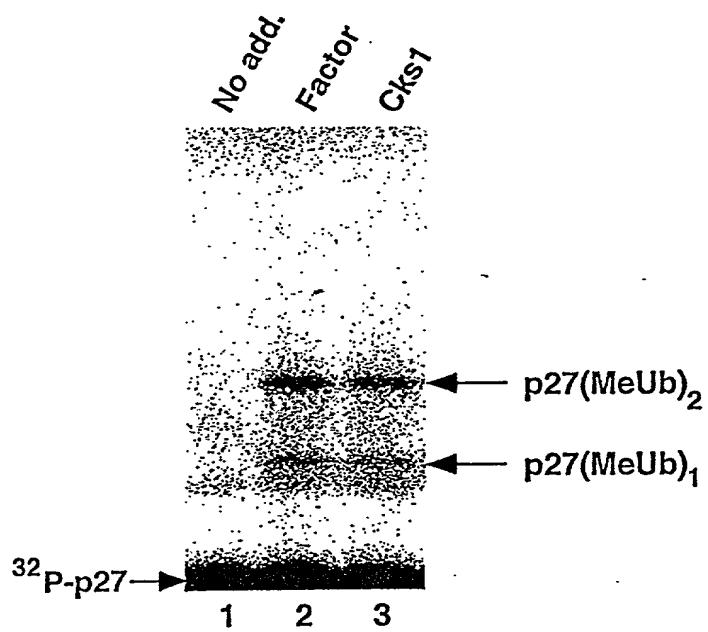
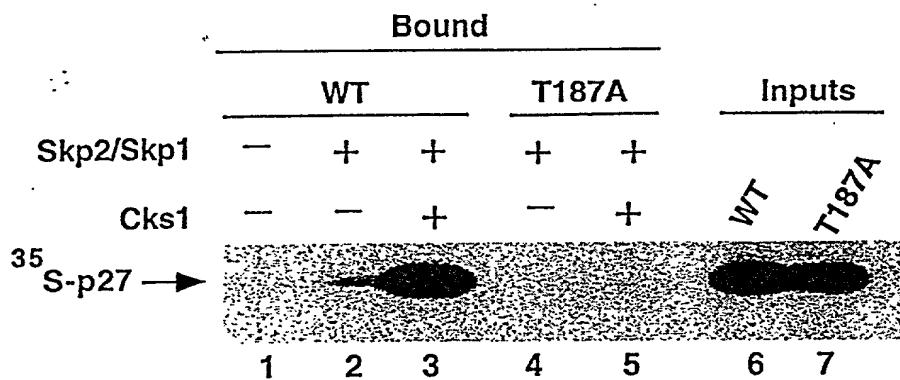


FIG. 49

5914-090

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C



D

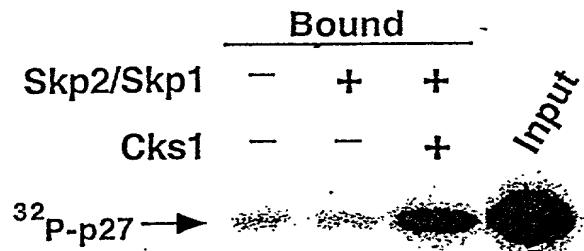
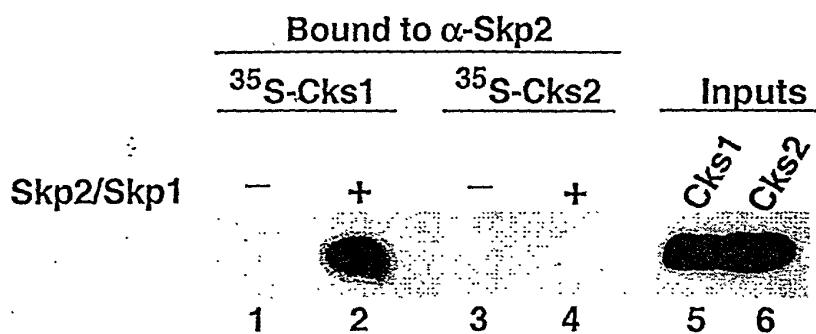


FIG. 49

5914-090

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A



B

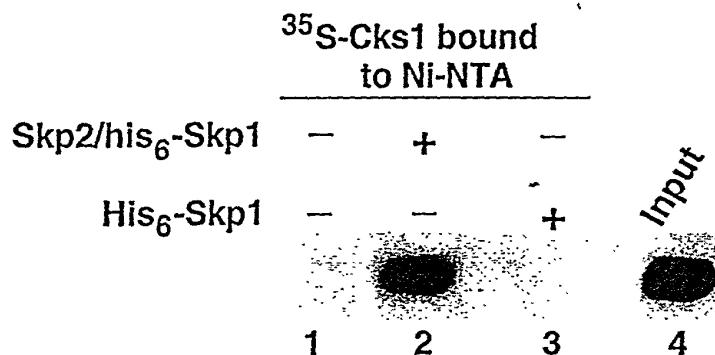
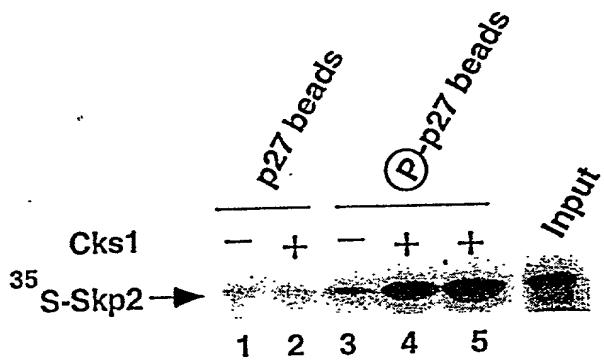


FIG. 5D

5914-090

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C



D

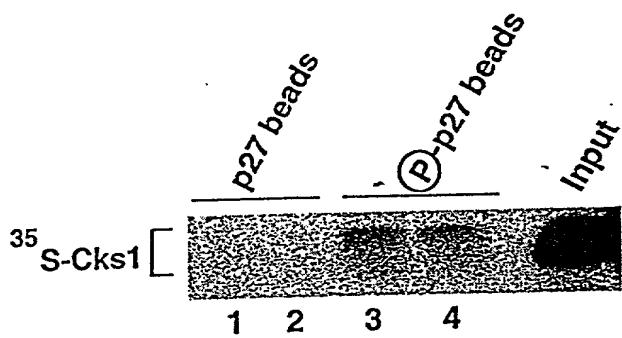
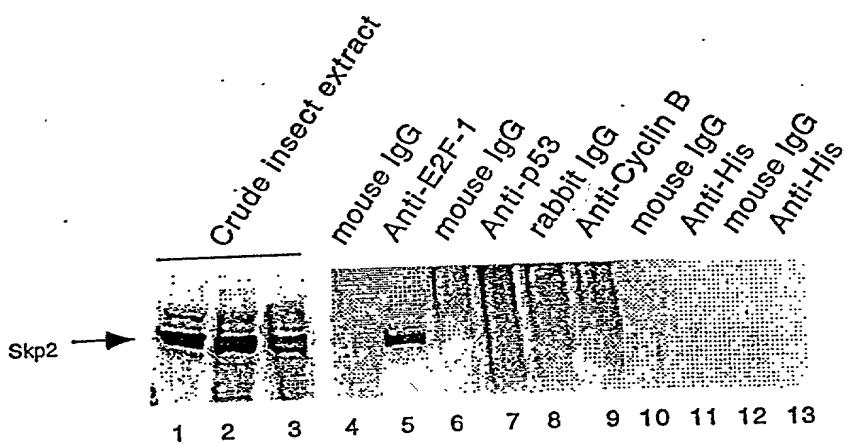


FIG. S2

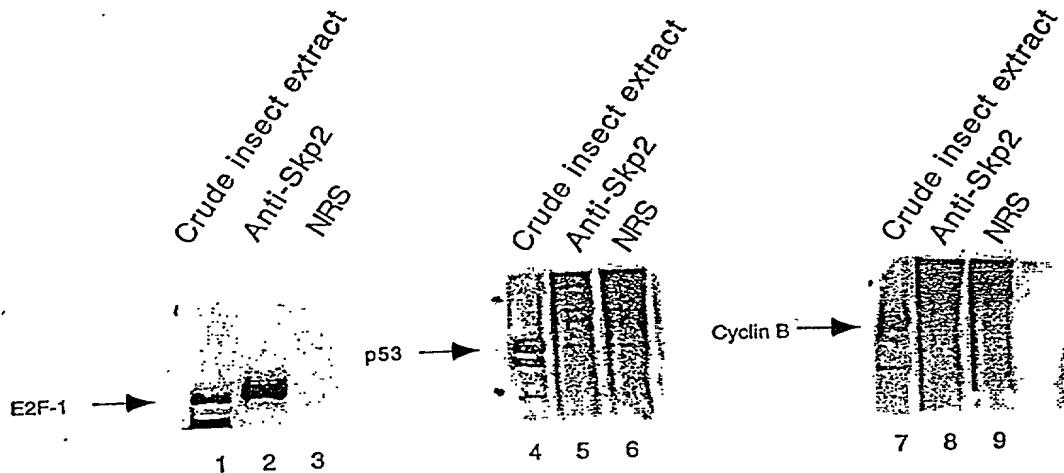
5914-0 9D

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A



B



C

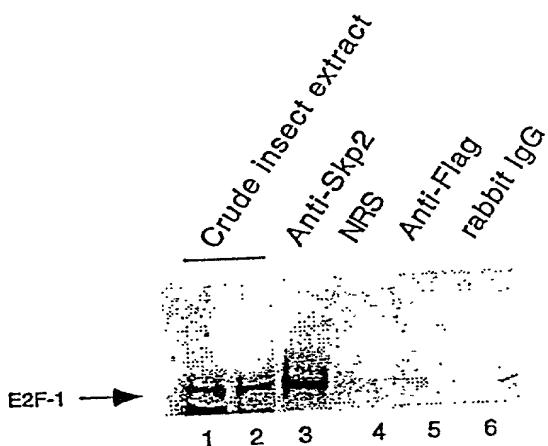


FIG. 51 A-C